LANDSCAPE ARCHITECTVRE

A QVARTERLY

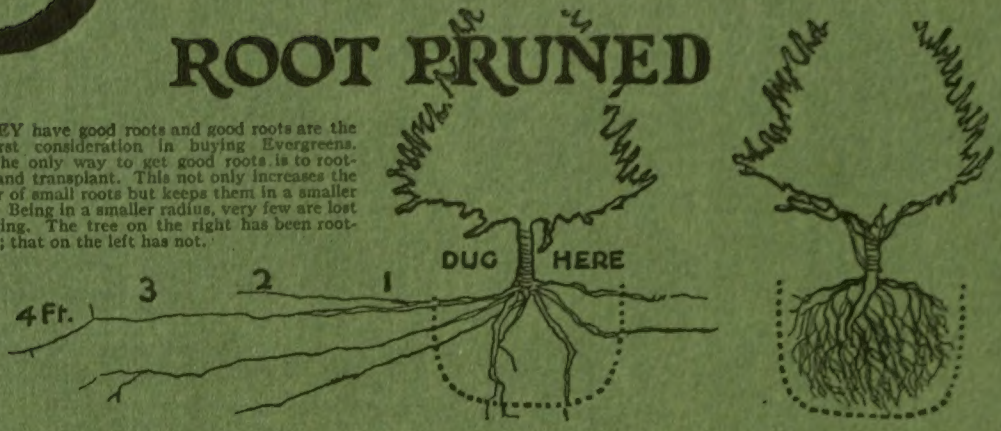
COVNTRY PLANNING
TOWN PLANNING
ESTATE PLANNING

OCTOBER ~ 1919

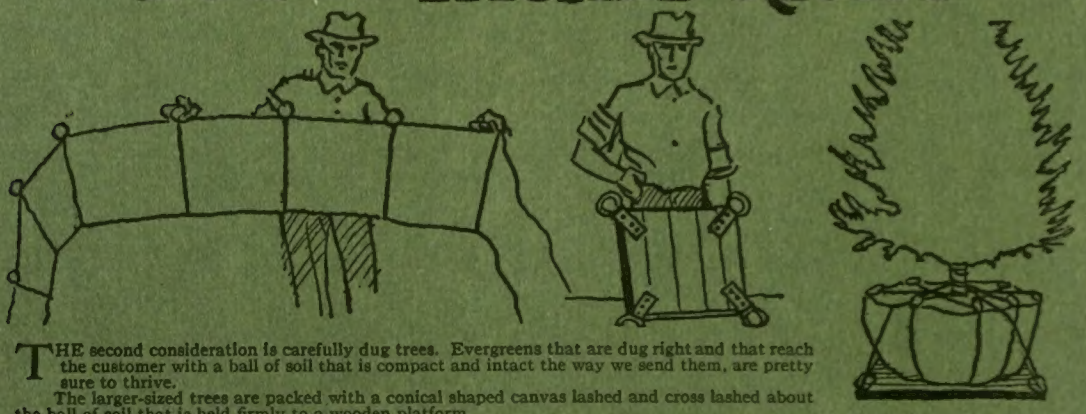
3 reasons why HICKS EVERGREENS are guaranteed to grow

ROOT PRUNED

THEY have good roots and good roots are the first consideration in buying Evergreens. The only way to get good roots is to root-prune and transplant. This not only increases the number of small roots but keeps them in a smaller radius. Being in a smaller radius, very few are lost in digging. The tree on the right has been root-pruned; that on the left has not.



DUG and PACKED RIGHT

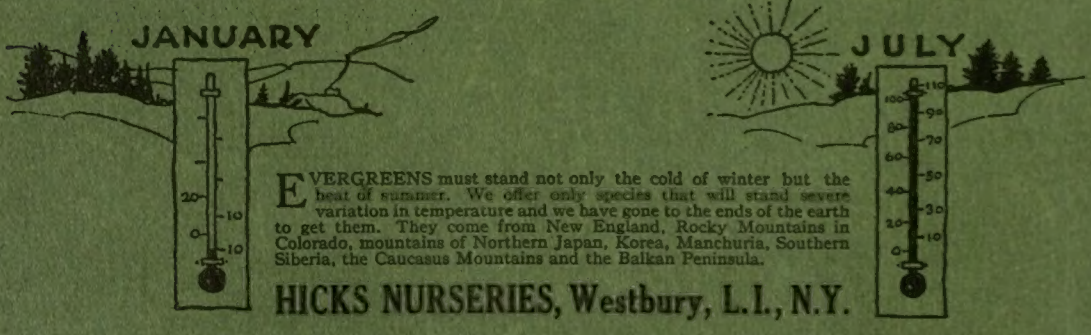


THE second consideration is carefully dug trees. Evergreens that are dug right and that reach the customer with a ball of soil that is compact and intact the way we send them, are pretty sure to thrive.

The larger-sized trees are packed with a conical shaped canvas lashed and cross lashed about the ball of soil that is held firmly to a wooden platform.

This is our own invention. Whether they remain in transit one day, ten days or longer makes little difference. Smaller trees with fibrous roots have the usual burlap sewed on.

ADAPTED TO CLIMATE



EVERGREENS must stand not only the cold of winter but the heat of summer. We offer only species that will stand severe variation in temperature and we have gone to the ends of the earth to get them. They come from New England, Rocky Mountains in Colorado, mountains of Northern Japan, Korea, Manchuria, Southern Siberia, the Caucasus Mountains and the Balkan Peninsula.

HICKS NURSERIES, Westbury, L.I., N.Y.

LANDSCAPE ARCHITECTURE

A QUARTERLY MAGAZINE

Country Planning—Town Planning—Estate Planning

Official Organ of the American Society of Landscape Architects

Vol. X | OCTOBER, 1919 | No. 1

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NEW YORK
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PUBLISHED QUARTERLY BY

LANDSCAPE ARCHITECTURE, Inc.

Crescent & Mulberry Sts., Harrisburg, Pa.

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50 CENTS A COPY. $2.00 A YEAR

Editorial Office 15 East 40th Street, New York City

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A QUARTERLY MAGAZINE

Official Organ of the American Society of Landscape Architects

Vol. X OCTOBER, 1919 No. 1

A CHECK-LIST OF PLANTS MENTIONED IN THE ARNOLD ARBORETUM BULLETINS

IN OCTOBER, 1914, we published a list of plants mentioned in the Bulletins of Popular Information issued by the Arnold Arboretum up to that time.

The present list includes almost all plants mentioned in the Bulletins from their beginning, on May 2, 1911, to the last number issued July 26, 1919. The list of October, 1914, is, of course, entirely revised, corrected to date, and incorporated in this list.

Mr. E. H. Wilson, Assistant Director of the Arnold Arboretum, has read this list in proof. For this kindness we wish to express our thanks and our appreciation of the moral support implied.

We who have worked on this list (and the work has not been easy) are again impressed by the value of the work being done by the Arboretum; in the introduction and testing of new varieties from different parts of the world; in rescuing from oblivion many native plants of limited distribution; in testing and pointing out the most valuable varieties of common plants for garden use; and in fostering our inherited love for plants as part of the natural landscape. It is a work which must constantly increase in value as the trees and shrubs planted there grow older and show their value or lack of value more clearly.

CHARLES DOWNING LAY
ROBERT WHEELWRIGHT

Size	Name	Time of Flowering	Habitat	Remarks
2–3′—	Abelia grandiflora (A.chinensis × A.uniflora)	Oct.	China	Fls. axillary, pink, tubular; lvs. dark green, lasting; rock-garden.
4–6′—	A. Engleriana	.....	China	Large fls.; strong-growing; hardy.
T.—	Abies amabilis	.....	N. A.	Handsome young tree.
T.—	A. balsamea	.....	N. E. A.	Short lived in cultivation.
D.—	var. Hudsonica	.....	.....	Very dwarf; not attractive.
	A. brachyphylla (see A. homolepis).			
T.—	A. cephalonica	.....	S. E. Europe	
	var. Apollinis	.....	Greece	Winter-killed 1917–18.
T.—	A. cilicica	.....	Asia Minor	Promising.
T.—	A. concolor	.....	Colorado	Fast growing; hardy; best for New England.
	var. Lowiana	.....	California	Hardy but less desirable than Colorado form.
T.—	A. Fraseri	.....	N. E. A.	In cultivation short lived.
T.—	A. grandis	.....	N. E. A.	Handsome young tree.
	A. Hudsonica (see A. balsamea, var. Hudsonica).			
T.—	A. holophylla	.....	Korea	Grows rapidly. So hardy it promises to rival A. homolepis.
T.—	A. homolepis	.....	Japan	As handsome and promising as A. concolor.
T.—	var. umbellata	.....	Japan	Green cones. Lighter lvs. than type.
D.—	A. lasiocarpa	.....	Rocky Mts.	Dwarf form; short lived; of no value ornamentally.
	A. Lowiana (see A. concolor, var. Lowiana).			
T.—	A. magnifica	.....	Calif., Sierra Nevada	Killed 1917–18.
T.—	A. nobilis	.....	N. W. A.	Just keeps alive as nearly prostrate shrub in Arboretum, though they are handsome 30-ft. specimens in North Mass.
T.—	A. Nordmanniana	.....	Caucasus	Hardy.
T.—	A. Picea (alba)	.....	Central Europe	
D.—	var.	.....	.....	Dwarf form.
T.—	A. Pinsapo	.....	Spain	Winter-killed 1917–18.
T.—	A. sibirica	.....	Siberia	Short lived; of no value.
T.—	A. Veitchii	.....	Japan	Handsome. Doubt longevity.
T.—	Acanthopanax ricinifolium	July	Japan-Korea	Small white fls. in flat clusters; palmately lobed dark lvs.; shining black fruits; large tree.
S.—	A. sessiliflorum	.....	E. Siberia	Frt. shiny, black; clusters conspicuous in winter.
T.—	Acer capillipes	.....	Japan	Green- and white-striped bark;
	A. diabolicum	.....	Japan	[has not grown well.
	var. purpurascens	.....	.....	Fls. cup-shaped, bright red.
12′—	A. ginnala	April	E. Siberia	Fls. pale yellow, fragrant; lvs. drop early; A. C. brilliant scarlet.
T.—	A. griseum	.....	C. China	Bark reddish brown, lustrous; young lvs. red.
T.—	A. Henryi	.....	China	Killed 1917–18.
T.—	A. longifolium	.....	China	Killed 1917–18.
T.—	A. mandshuricum	.....	Siberia	Large tree. Perfectly hardy.
100′—	A. platanoides	April	Europe	Bright yellow fls. before the lvs.; A. C. clear yellow.
T.—	var. columnare	.....	.....	Pyramidal, erect branches.
T.—	var. cucullatum	.....	.....	Abnormal lvs.
S.—	var. globosum	.....	.....	Dwarf shrub; one of the most valuable of all dwarf maples.
S.—	var. nanum	.....	.....	Pyramidal; dwarf, attractive, use-
T.—	var. laciniatum	.....	.....	Abnormal lvs. [ful for gardens.

T. = Tree. D. = Dwarf. S. = Shrub. V. = Vine. Heavy-face type = Evergreen. A. C. = Autumn Coloring

*One of best of species or varieties.

"Weevil" indicates Conifer is most subject to attack of the white pine weevil.

Size	Name	Time of Flowering	Habitat	Remarks
	Acer platanoides			
T.—	var. palmatum	.....	.....	Abnormal lvs.
T.—	var. Schwedleri	.....	.....	Purple lvs.
T.—	var. Stollii	.....	.....	Better than Schwedleri.
T.—	A. rubrum	March	N. A.	Earliest to change color.
	A. rufinerve			
	A. saccharum			
T.—	var. monumentale	.....	.....	Columnar.
T.—	A. spicatum	April	N. A.	Shrub or small tree. Fls. yellow, in long, erect racemes.
T.—	A. tataricum	April	Europe and Asia	Small tree or large shrub. Fls. white, erect clusters; scarlet wings of fruit in summer, remaining long.
T.—	A. truncatum	.....	N. China	Small tree. Hardy.
S.—	Æsculus arguta	.....	Okla. and Texas	Yellow fls.; small shrub.
	Æ. austrina (see Æ. discolor, var. mollis.)			
T.—	Æ. Bushii	.....	Arkansas	Perhaps rarest flowering tree in Arboretum.
	(Æ. glabra × Æ. discolor, var. mollis?)			
T.—	Æ. carnea	.....	Europe	Similar to Æ. Hippocastanum; blooms later. In nurseries called Æ. rubicunda.
	(Æ. Hippocastanum × Æ. Pavia)			
T.—	var. Briotii	.....	.....	Fls. handsomer and darker colored.
S.—	Æ. discolor	.....	Georgia, Alabama and South	Fls. red calyx, yellow petals.
S.—	var. mollis	June	.....	Fls. scarlet. Beautiful shrub or small tree.
5–6′—	Æ. georgiana	June	Central Georgia	Large red and yellow fls. in short compact clusters; broad round-topped; good garden plant.
T.—	Æ. glabra	May	U. S.	Fls. pale yellow. Ohio Buckeye. Earliest of American species to fl. Occasional bright red A. C.
T.—	var. Buckleyi	.....	W. Missouri	Seven instead of five leaflets; not otherwise different.
T.—	var. leucodermis	.....	Mo. and Ark.	Pale bark.
S.—	Æ. Harbinsonii	.....	.....	Fls. red and yellow. Lvs. open late. Good garden plant.
	(Æ. georgiana × Æ. discolor, var. mollis?)			
T.—	Æ. Hippocastanum	.....	.....	Noblest of exotic trees; needs deep, rich soil; few trees suffer more from city conditions.
	var. Baumannii (fl.-pl.)	.....	.....	All horticultural curiosities of no interest to general planter.
	var. incisa	.....	.....	
	var. laciniata	.....	.....	
	var. pyramidalis	.....	.....	
	var. umbraculifera	.....	.....	
	var. variegata	.....	.....	
D.—	Æ. humilis	June	Europe	Dwarf; fls. yellow and red; attractive and useful.
S.—	Æ. hybrida	.....	.....	Many forms. Fls. of different shades of red; valuable garden plant.
	(Æ. octandra × Æ. Pavia).			
D.—	Æ. Michauxii	June	Europe	Dwarf; fls. yellow and red; attractive and useful.
T.—	Æ. octandra	.....	E. States	Valuable ornamental tree; differs from Æ. glabra in absence of prickles on fruit.
T.—	Æ. Pavia	.....	S. States	Not yet established.
	var. atrosanguinea	.....	.....	Flowers freely.
	var. Whittleyi	.....	.....	Flowers freely.
6′—	Æ. parviflora	.....	S. States	Fls. white, in long, narrow erect spikes; rarely over 6′ high but sometimes 20 ft. or more in diameter. Perfectly hardy.

Size	Name	Time of Flowering	Habitat	Remarks
D.—	Æsculus parviflora nana	.....	.....	Dwarf; fls. yellow and red; attractive and useful.
	Æ. rubicunda (see Æ. carnea)			
	Æ. turbinata	.....	Japan	Closely related to Grecian tree. Fls. less showy, white with scarlet markings. Promises to be valuable.
	Æ. versicolor (see Æ. hybrida)			
T.—	Ailanthus	.....	Asia	Most generally useful of large deciduous exotic trees.
V.—	Akebia lobata	.....	Japan	Fls. small, purple. Frt. edible, rarely produced here. 3 leaflets; bronze A. C.
V.—	A. quinata	.....	Japan	Slender and graceful vine; lvs. stay green very late.
T.—	Alnus glutinosa	.....	Europe	Large tree.
60–70′—	A. hirsuta	April	Japan	Medium size; shapely tree; smooth pale bark; large dark green lvs.
T.—	Amelanchier alnifolia	.....	N. W. Coast	
S.—	A. Bartramiana	.....	N. E. N. A.	Small shrub of swamps and bogs. Solitary fls.
T.—	A. canadensis	May	West S. States.	Larger than A. lævis; easily distinguished by coat of fine down which covers the lower surface of the lvs. which are first silvery, never red.
	A. humilis.			
T.—	A. lævis	May	N. A.	Easily distinguished by red color of unfolding lvs.
S.—	A. oblongifolia	May	N. A.	Always shrubby; border of swamps; gray color of unfolding lvs., thickly covered with silky hairs.
S.—	A. obovalis	May	N. A.	
	A. pumila			
	A. sanguinea.			
	A. spicata.			
	A. stolonifera			
3–4′—	Amorpha canescens	July	Middle West	Fls. small, violet, crowded in clustered terminal spikes; lvs. and stems whitened with hoary down.
V.—	Ampelopsis megalophylla	.....	.....	20–30′ long; large divided lvs. often more than 3′ in diameter.
	Ampelopsis (see Parthenocissus)			
3–4′—	**Andromeda** (see Lyonia and Pieris).			
D.—	**A. glaucophylla**	.....	.....	Swamp plants; can be grown in dry soil.
D.—	**A. polifolia**	.....	.....	
T.—	Aralia chinensis	.....	Asia	Resembles A. spinosa.
T.—	var. glabrescens	.....	Japan	Lvs. pale underneath.
T.—	var. mandshurica	.....	Manchuria	
30′—	A. spinosa	.....	N. A.	Fls. small, white, in twice compound panicles 3–4′ long. Black frt. ripe in Oct. Not always hardy in N. E.
V.—	**Arctostaphylos Uva-ursi**	.....	N. A.	Evergreen carpet plant. Frt. bright red; excellent for poor soil.
8′—	Aronia arbutifolia	.....	N. A.	Tall, slender, irregular. Frt. scarlet, remaining well into winter; scarlet A. C.; showiest of all N. A. shrubs.

Size	Name	Time of Flowering	Habitat	Remarks
10′	—Aronia atropurpurea	.....	N. A.	Tall, erect shrub. Frt. dark vinous red, ripens and falls early. Orange and red A. C.
12–18″	—A. melanocarpa	.....	.....	Stems spreading into a broad mat. Fruit black and lustrous.
6–10′	— var. elata	.....	.....	More common.
6–10′	— var. grandifolia	.....	.....	Broader lvs.
	Azalea (see Rhododendron).			
T.	—Asimina triloba	.....	S. U. S. A.	Now established in Arboretum.
10–15′	—Benzoin æstivale	April	N. A.	Fls. yellow. Frt. bright red, small. Lvs. fragrant, uninjured by insects; bright yellow A. C.
S.	—B. obtusilobum	.....	Japan	One of rarest plants in Arboretum. A. C. gold.
	Berberis (see Mahonia).			
D.	—B. diaphana	.....	China	Exceptional value. Low, round shrub. Fls. solitary, pale yellow. Frt. red, large. A. C. brilliant.
S.	—B. dictyophylla	.....	China	Tall shrub; slender erect stems. Frt. red. Lvs. small, shiny, light green above, silver white below; upper side of lvs. turns scarlet; perfectly hardy.
S.	—**B. Gagnepainii**	.....	.....	Tall, yellow-gray branches.
S.	—**B. Julianæ**	.....	.....	Tall, pale branches. Frt. blue-black. Lvs. dark, shining.
S.	—B. Neubertii (B. vulgaris × B. aquifolium)	.....	.....	Moderate size, broad-topped shrub. Lvs. large, dark, last through November.
S.	—B. Poiretii			
S.	—B. Regeliana	.....	Japan	Called Hakodate. Medium size; Fls. large, pale yellow in long clusters. Frt. showy; large, thick lvs.; A. C. orange and red.
S.	—**B. Sargentiana**	....	.....	Tender.
S.	—B. Sieboldii	.....	Japan	Lvs. hardly surpassed in brightness of scarlet.
S.	—B. sinensis.			
S.	—B. Thunbergii.			
S.	— var. microphylla.			
S.	— var. Maximowiczii	.....	.....	Larger than the type.
S.	—**B. triacanthophora**	.....	China	Injured 1917–18.
S.	—B. Vernæ	May	China	Attractive. Fls. light yellow.
D.	—**B. verruculosa**	June	China	Dwarf, spreading. Fls. yellow. Frt. black. Tender.
S.	—B. vulgaris	.....	Europe	None more useful.
S.	—B. Wilsonæ	.....	China	Rather tender.
S.	— var. Stapfiana	.....	.....	Considered hardier, injured 1917–18.
T.	—Betula pendula	.....	Europe	Slender, pendulous branches.
T.	— var. dalecarlica	.....	.....	Cut-leaved, weeping. Insects have killed it off.
T.	— var. gracilis	.....	.....	Pendulous. Lvs. deeply divided.
T.	— var. Youngii	.....	.....	Another pendulous form.
T.	—B. Maximowiczii	.....	N. Japan	Handsomer than B. papyrifera. Pinkish bark.
S.	—Buddleia Davidii (variabilis)	.....	.....	Fls. small, purple, fragrant. Not perfectly hardy but fls. on new wood. One of the most useful of recent discoveries.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	**Buxus microphylla**, var. **japonica**		Japan.....	Shrub of rather open habit. Lvs. small, yellow-green. The only really hardy box.
S.—	**B. sempervirens.**			
S.—	Callicarpa americana.....	.....	N. A.....	Axillary clusters of violet frts. Not hardy here.
S.—	C. japonica.....	August	Japan and Korea	Fls. small, pink, not conspicuous. Frt. violet. Smaller than American species; hardy; desirable.
D.—	**Calluna vulgaris**.....	.....	Europe.....	Plant in well-drained, sandy soil, fully exposed to sun. Perfectly hardy, spreads into masses. Remains in fl. 2–3 months.
D.—	var. alba.....	.....	.....	Fls. white.
D.—	var. alba minor.....	.....	.....	Dwarfer than var. alba.
D.—	var. alba rigida.....	.....	.....	Fls. white.
D.—	var. alba Searlei.....	.....	.....	Tall-growing. Fls. white.
D.—	var. alba tenella.....	.....	.....	Fls. white
D.—	var. Alportii.....	.....	.....	Tall-growing. Fls. crimson.
D.—	var. hypnoides.....	.....	.....	Very compact, small-lvd. Fls. purple, sparse.
D.—	var. rubra.....	.....	.....	Dwarf, compact. Fls. crimson.
D.—	var. tomentosa.....	.....	.....	Compact. Fls. red. Lvs. gray-green.
S.—	Caragana Maximowicziana.	June	N. China.....	Slender, wide-spreading, arching and spiny stems. Fls. canary-yellow, abundant.
T.—	Carpinus Betulus.			
T.—	var. pendula.....	.....	.....	Not particularly pendulous.
T.—	var. pendula Dervæsii.	.....	.....	Handsomer plant than var. pendula.
T.—	Castanea crenata.....	.....	Japan.....	Hardy but does not grow particularly well.
T.—	C. Henryi	.....	W. China.....	Noble tree.
T.—	C. mollissima.....	.....	China.....	A tree of good promise.
S.—	C. pumila.....	.....	N. A.....	Not immune to disease.
T.—	Catalpa bignonioides.....	.....	U. S. A.....	
S.—	var. nana.....	.....	.....	C. Bungei of nurseries.
T.—	C. Bungei.....	.....	China.....	Fls. white, in small clusters. Lvs. dark. Probably of slight value. Injured 1917–18.
S.—	C. Bungei (see C. bignonioides, var. nana).			
T.—	C. Duclouxii	.....	W. China.....	Seems hardy.
T.—	C. Fargesii.....	.....	W. China.....	Seems hardy.
T.—	C. Kaempferi (see C. ovata).			
T.—	C. ovata.....	.....	Cent. and W. China.....	Small tree. Fls. small, light yellow, in profusion. Hardier than either American species but inferior.
T.—	C. speciosa.....	.....	N. A.....	Handsomest of all catalpas and a fast-growing desirable ornamental.
T.—	C. Teasii..... (C. ovata × C. bignonioides)	July	.....	Hardy; fast-growing. Enormous fl. clusters.
2–3′—	Ceanothus americanus.....	July	E. U. S. A.....	Broad shrub. Fls. white in dense clusters. Valuable for naturalization. Many hybrids between this and Californian varieties raised in Europe only one of which is hardy in Arboretum.
S.—	C. Fendleri.....	.....	Rocky Mts.....	Only hardy western species.
2–3′—	C. ovatus.....	June	E. U. S. A.....	Varies chiefly from C. americanus in shape of lvs.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	**Cedrus atlantica glauca**	.....	.....	Winter killed 1917–18.
V.—	Celastrus articulatus	.....	Japan	Frt. in axillary clusters.
V.—	C. flagellaris	.....	N. E. Asia	Hardy; little value.
V.—	C. scandens	.....	N. A.	
T.—	Cercidiphyllum japonicum	May	Japan	Very hardy and generally satisfactory tree in E. Mass. Fls. inconspicuous. Unfolding lvs. red.
T.—	var. chinense	.....	China	
50′—	Cercis canadensis	May	N. A.	
T.—	var. alba	.....	.....	Fls. white.
50′—	C. chinensis	.....	China	Fls. more beautiful and larger than C. canadensis.
T.—	C. reniformis	.....	Texas	Branches often winter-killed.
S.—	Chænomeles lagenaria	May	China	Better known as Pyrus japonica.
S.—	C. japonica	.....	Japan	Japanese Quince.
D.—	var. Maulei	.....	Japan	Low spreading. Fls. crimson to white. Well suited for rock-garden, low banks, etc.
T.—	**Chamæcyparis pisifera argentea**	.....	Japan	Attractive small plant.
T.—	**C. thyoides**	.....	N. A.	White Cedar. Injured 1917–18.
D.—	var. **ericoides**	.....	.....	Dwarf, compact, pyramidal habit. Red in winter.
D.—	var. **leptoclada**	.....	.....	Dwarf; bluish green.
T.—	**C. obtusa**	.....	Japan	
D.—	var. **nana**	.....	.....	Best variety.
2–3′—	Chamædaphne calyculata	.....	N. A.	Low, much-branched shrub. Fls. white. Lvs. small. Does well in dry garden soil.
T.—	Chionanthus retusa	.....	China	Less attractive than C. virginica; of comparatively little interest.
T.—	Cladrastis sinensis	.....	China	Promises to be of less value than C. tinctoria.
V.—	Clematis apiifolia	.....	Japan	Hardy, fast-growing, free-blooming
V.—	C. dioscoreifolia	.....	Quelpaert Is.	Rapid grower. In appearance like C. paniculata. Fls. fragrant, larger and showier, blooms later and lasts till mid-October. Lvs. thicker. Unusually hardy.
V.—	C. paniculata	.....	Japan	Fls. small. Frt. showy and persistent.
V.—	C. tangutica	.....	W. China	Hardy. Fls. vase-shaped, bright clear yellow. Frt. showy.
S.—	Clethra acuminata	July	S. Appalachian.	Fls. yellowish white, drooping clusters. Lvs. dull. Not as desirable as C. alnifolia.
S.—	C. alnifolia	July	Maine to Florida	Perhaps the most beautiful summer-flowering shrub of New England.
10–15′—	C. barbinervis	July	Japan	Blooms 2 weeks earlier and is a larger plant than C. alnifolia. Fls. less fragrant.
	C. canescens (see C. barbinervis).			
S.—	C. tomentosa	July	Florida	White hairs on underside of lvs. Fls. 2–3 weeks later than C. alnifolia. Hardy.
V.—	Cocculus trilobus	.....	Japan	Holds its bright green lvs. late in fall.
S.—	Colutea arborescens	July	S. Europe	Fls. bright yellow. Inflated pods tinged with rose-color.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Colutea cilicica	July	Asia Minor	Fls. bright yellow. Inflated pods tinged with rose-color.
S.—	C. orientalis	July		Fls. sulphur or orange-red. Pods more ornamental than fls.
S.—	Cornus alba	June	Europe	
S.—	var. Rosenthalii			Promises well.
S.—	C. Amomum		N. A.	Fls. small, white. Not satisfactory unless it has plenty of room; needs circle of 25 feet. Frt. bright blue in autumn. Purple stems.
10′—	C. Arnoldiana (C. racemosa × C. obliqua)		A. Arboretum	Fl. clusters handsomer than those of its parents; bears little fruit.
40′ S.—	C. asperifolia	July	S. U. S. A.	Tall, broad shrub. Frt. white.
S.—	C. Baileyi			Frts. ripe in July.
S.—	C. candidissima (see C. racemosa).			
S.—	C. circinata (see C. rugosa).			
60′—	C. controversa		W. China	Lvs. alternate. Spreading branches. Promises to be valuable.
S.—	C. femina	July	S. U. S. A.	
T.—	C. florida			Not native in Arboretum. Not so handsome as C. Nuttallii.
T.—	var. pendula			No especial value.
	C. kousa		Japan and China	Hardy. Small tree. Fls. abundant, bracts larger, more pointed, not so white as C. florida and fls. 3–4 weeks later.
S.—	C. mas	March	Europe and W. Siberia	Fls. bright yellow, in dense clusters. Foliage good. Frt. bright scarlet, lustrous.
60–70′—	C. Nuttallii		Pacific States	Involucres nearly twice the size of C. florida. Difficult to keep alive outside its native damp woods. Never succeeded in Arboretum.
S.—	C. obliqua		U. S. A.	
	C. paniculata (see C. racemosa).			
6′—	C. paucinervis	July	Central China	Fls. white. Frt. black. Trifle tender.
S.—	C. racemosa	July	U. S. A.	Round-headed; fls. freely, creamy white. Frt. white. Lvs. turn dark red.
10′—	C. rugosa		U. S. A.	One of best native dogwoods; Fls. creamy white. Frt. pale blue. Lvs. large. Green branchlets. Difficult to transplant; spreads into broad thickets.
S.—	C. sanguinea		S. Europe	Small flat fl. clusters. Frt. black.
S.—	C. stolonifera		E. N. A.	Frt. white. [Red branches.
S.—	var. flaviramea			Frt. yellow.
S.—	Coronilla Emerus		S. E. Europe	Holds its lvs. late; rather tender.
S.—	Corylopsis Gotoana		Japan	Hardiest. Promises to become popular.
	C. pauciflora		Japan	
4–5′—	C. spicata	April	Japan	Spreading branches. Fls. yellow, in spikes.
S.—	C. Veitchiana	April	China	Fls. primrose-yellow, in short pendulous racemes before lvs. Important addition. Killed to ground 1917–18.
S.—	C. Willmottiæ		China	Fls. or buds apt to be destroyed by cold in N. E. This also true of C. Veitchiana. Killed to ground 1917–18.

Size	Name	Time of Flowering	Habitat	Remarks
80′—	Corylus chinensis	.....	China	Promises to become important ornamental tree.
S.—	Cotinus Coggygria	.....	S. Europe, China	
30′—	C. americanus	.....	Alabama and Missouri	Fls. less conspicuous. Foliage larger, lighter color, turns orange and scarlet. Perfectly hardy.
S.—	Cotoneaster acutifolia	.....	China	Fls. red. Frt. black.
D.—	var. villosula	.....	Thibet	Fls. red. Frt. black. Dwarfer, more compact than type.
D.—	C. adpressa	.....	China	Dwarfest of all, creeping. Fls. red. Frt. red, larger than C. horizontalis. Lvs. persistent.
S.—	C. ambigua	.....	China	Fls. red. Frt. black.
D.—	C. apiculata	.....	China	Fls. red. Frt. red. Lvs. persistent.
	C. bullata			
S.—	var. macrophylla	.....	China	Fls. red. Frt. red.
S.—	var. floribunda	.....	China	Fls. red. Frt. red.
S.—	C. Dielsiana	.....	W. China	Arching stems and branches. Fls. red. Frt. red. Lvs. small, A. C. reddish purple. One of best.
S.—	var. elegans	.....	China	Fls. red. Frt. red.
S.—	C. divaricata	.....	W. China	Fls. small, red. Frt. red in great abundance. One of best.
S.—	C. foveolata	.....	W. China	Fls. red. Frt. black. Brilliant orange and crimson A. C. This and C. moupinensis are tallest.
S.—	C. Franchetii	.....	China	Fls. red. Frt. red. Less hardy than others.
1–2′—	C. horizontalis	.....	W. China	Low, spreading, forming mat. Fls. red. Frt. red, small. Lvs. dark and lustrous, persistent.
D.—	var. perpusilla	.....	China	Dwarfer, smaller lvs. than type.
D.—	var. Wilsonii	.....	China	Taller than type.
S.—	C. hupehensis	.....	W. China	Fls. white, large. Frt. large, scarlet. Tall, broad, fast growing.
D.—	C. microphylla	.....	.....	Low mat.
S.—	C. moupinensis	.....	W. China	Fls. reddish. Frt. black. A. C. brilliant. Tree-like habit.
S.—	C. multiflora, var. calocarpa.	June	China	Slender, arching stems. Fls. white, conspicuous. Frt. scarlet.
S.—	C. nitens	.....	China	Fls. small, red. Frt. black. Smaller, more compact than C. horizontalis.
S.—	C. racemiflora	.....	China	Fls. white. Frt. red.
S.—	var. soongarica	June	China	Large and vigorous shrub. Fls. white. Frt. red, completely covering branches. Handsomest of all.
S.—	C. Zabelii	.....	China	Fls. red. Frt. red.
S.—	var. miniata	.....	China	Fls. red. Frt. red.
T.—	Cratægus apposita			
T.—	C. aprica	.....	S. U. S. A.	Fls. large. Frt. large, dull orange-red. Lvs. small. Perfectly hardy.
40′—	C. arkansana	May	Arkansas	Long wide-spreading branches. Late frt. to end of November.*
T.—	C. Arnoldiana	May	N. E.	Strong zig-zag branches. Frt. scarlet, rarely yellow, ripens in August, falls early.
S.—	C. Bissellii	.....	.....	A. C. good.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Cratægus Boyntonii		S. Appalachian.	Tree-like. Fls. large in few-fld. clusters. Frt. yellow-green, flushed red. Brilliant A. C.
S.—	C. Buckleyi		S. Appalachian	Tree-like habit. Fls. large. Frt. large, russet-red. A. C. brilliant.
T.—	C. Carrierei			Thick-pointed, lustrous lvs. Frt. large, orange-red. Ornamental plant of the first class.
T.—	C. coccinioides		St. Louis	Large, bushy tree. Compact fl.-clusters. Frt. red. A. C. orange and scarlet.
T.—	C. colorado			Frt. bright red in abundance in early September.
30′—	C. cordata		S. Appalachian.	Latest to flower. Lvs. turn orange and scarlet. Best in winter. Frt. small, scarlet, lasting until spring. Washington Thorn.*
T.—	C. Crus galli			Cockspur Thorn.
S.—	C. cuprea			Small shrub. A. C. good. Frt. russet or copper.
S.—	C. Delosii		Toronto	Frt. orange and red, large numbers in a cluster.
T.—	C. Dawsoniana			
T.—	C. Douglasii		Puget Sound	Frt. black.
T.—	C. durobrivensis			Fls. 1 in. diam. in many-fld. clusters. Frt. dark crimson, lasts till midwinter.
20′—	C. Ellwangeriana			Wide-spreading horizontal branches. Frt. large, oblong, falling in October.
T.—	C. fecunda		Missouri	Large round-topped tree. Fls. small with rose-colored anthers, in many-fld. clusters. Frt. abundant, orange-red. Lvs. lustrous.
S.—	C. fœtida			Small shrub. Fls. and frt. large.
5–6′—	C. fructuosa		West Chester, Pa.	Frt. deep orange-red in small erect clusters. A. C. red-purple.
S.—	C. fruticosa			
S.—	C. infera		Pennsylvania	Frt. orange-red. A. C. brilliant orange and red.
S.—	C. intricata	June	U. S. A.	Dwarf habit.
T.—	C. macracantha	June		Long, stout spines cover branches. Would make good hedge. Fls. especially showy in large clusters. Frt. less beautiful than C. succulenta.
D.—	C. modesta		N. E. U. S. A.	Often only 12-18 in. high. Frt. green, yellow or orange and red. A. C. bright scarlet.
T.—	C. mollis	May	Ohio, Ill.	Large tree. Frt. ripens and falls in Sept.
T.—	C. monogyna		Europe	
T.—	var. pendula			Weeping form, graceful and worth cultivating.
T.—	C. multiflora			Tall, slender, wide-spreading. Frt. black. Fls. white.
	var. calocarpa			Fls. larger than type.
S.—	C. nemoralis			Small shrub. Fls. and frt. large.
T.—	C. nigra	May	Europe	Fls. large. Frt. black, early ripening.
30′—	C. nitida	May	Miss. Valley	Wide-spreading branches, lustrous foliage. Frt. orange-red, long persistent.*

Size	Name	Time of Flowering	Habitat	Remarks
	Cratægus orientalis	.....	S. E. Europe...	Deeply divided silvery lvs. Large fls. Orange and red frt.
	T.—C. Oxycantha			
	S.—C. Peckii			
20′	—C. pedicillata	.....	.....	Ascending and spreading branches.
	T.—C. peregrina	.....	Persia	Frt. dark purple.
	T.—C. persistens	.....	.....	Lvs. remain green after all other hawthorn lvs. have fallen. Frt. crimson, remains late. Exceptional value.*
	T.—C. pinnatifida	.....	N. China, Manchuria and Korea	Lvs. large, lustrous, deeply divided. Fls. large. Frt. scarlet.
	var. major	.....	.....	Handsome. Cultivated for its frt. in Pekin.
	T.—C. pruinosa	.....	N. A.	Lvs. large, blue-green. Fls. large with rose-colored anthers. Frt. large, bright scarlet, remaining late. Few handsomer.
	T.—C. prunifolia	.....	Unknown	Compact small tree. Frt. scarlet. Lvs. lustrous. A. C. brilliant.
	T.—C. punctata	.....	N. E. A.	Large, wide-branched, flat-topped tree. Frt. red or yellow.
	T.—C. rivularis	.....	Rocky Mts.	Small tree. Frt. black.
	T.—C. rotundifolia	.....	N. E. A.	
	S.—C. Smithii	June	W. Penn.	
	T.—C. submollis	.....	Ill.–Texas	Frt. pear-shaped, ripening and falling in Sept.
	T.—C. succulenta	.....	N. E. A.	Late-flowering. Frt. scarlet, globose, on long stems, eagerly eaten by birds.
	T.—C. tomentosa	June	E. N. A.	Type of the group Tomentosæ
	S.—C. triflora	June	S. U. S. A.	Usually 3-fld. clusters. Frt. dull red.
	D.—C. uniflora	June	U. S. A.	1–2 ft. high. Fls. small, in one- rarely two-fld. clusters; no great value.
	S.—Cytisus capitatus	July	Europe	Small shrub. Fls. yellow.
	S.—C. leucanthus	.....	.....	Fls. white.
2–3′	—C. nigricans	July	Europe	Low, slender, hardy shrub. Fls. yellow in long, erect racemes. For this climate one of the best plants of its class.
	S.—C. purgans	.....	Europe	Seems at home.
	C. scoparius.			
	D.— var. Andreanus compactus		.....	Fls. yellow, dark crimson wings. Stems nearly prostrate. Perfectly hardy.
	D.—Daphne alpina	June	Alps	Fls. white.
	D.—D. altaica	June	S. Siberia	Fls. white, fragrant.
	D.—D. caucasica	June	Caucasus	Fls. white, disagreeable odor.
	D.—**D. Cneorum**	May	Central Europe	Rather capricious as to soil and situation.
	D.—D. genkwa	May	China	Fls. pale lilac. Winter killed 1917–18.
2′	—D. Mezereum	April	Europe	Fls. fragrant, before lvs. Frt. scarlet, showy.
	T.—Davidia involucrata	.....	W. China	Medium-sized tree related to our Flowering Dogwood, but with two large floral bracts in place of the four smaller bracts of the American tree.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Decodon verticillatus	.....	Maine to Florida and Louisiana....	Water Willow, better known as Nesæa. Shrub with arching stems from 2 to 3 feet long, growing only in the wet, often submerged, borders of streams and ponds where it often spreads into broad thickets. Fls. and frts. are not conspicuous. Stems hanging over the water make an interesting and attractive margin. A. C. early and bright scarlet.
S.—	Deutzia candelabrum (D. Sieboldiana × D. gracilis)	.....	.....	Graceful drooping branches. Fls. white, in elongated clusters.
S.—	D. discolor	.....	C. China.....	Fls. white in clusters.
S.—	var. major	.....	China.....	Fls. larger than type. More vigorous plant.
S.—	D. globosa	.....	W. China.....	Erect stems. Fls. white in clusters.
D.—	D. gracilis	.....	Japan.....	Fls pure white, erect or spreading racemes. Better in S. Middle States than here.
D.—	D. grandiflora	June	N. China.....	Distinct; first to bloom. Fls. white, in one-to-three-flowered clusters. Rare in cultivation.
S.—	D. hypoglauca	.....	China.....	Handsome. As hardy as D. parviflora. Fls. pure white, in clusters.
S.—	D. kalmiæflora (D. purpurascens × D. parviflora).	.....	.....	Fls. carmine, small compact clusters.
5-6′—	D. Lemoinei (D. gracilis × D. parviflora).	June	.....	Resembles D gracilis, taller and broader. Fls. larger, pure white.
	var. Avalanche	June	.....	Handsome and more compact forms.
	var. Boule de Neige*	June	.....	
	var. Candelabre	June	.....	
	var. compacta	June	.....	
S.—	D. longifolia	.....	W. China.....	Tall shrub. Sometimes injured by cold.
S.—	D. magnifica (D. Vilmorinæ × D. scabra).	.....	.....	Hardy and handsome.
S.—	D. myriantha (D. Lemoinei × D. purpurascens).	.....	.....	Fls. white.
S.—	var. Boule Rose	June	.....	Handsome varieties, apparently hardy. Fls. tinged rose.
S.—	var. Fleur de Pommier	June	.....	
S.—	D. parviflora	.....	China and Mongolia....	Large vigorous shrub. Fls. in compact, many-fld. corymbs.
S.—	D. purpurascens	.....	.....	Not hardy.
S.—	D. reflexa	.....	W. China.....	Value undetermined.
S.—	D. rosea (D. gracilis × D. purpurascens).	.....	.....	Fls. tinged purple.
S.—	var. campanulata	June	.....	Fls. tinged purple more or less.
S.—	var. eximia	June	.....	
S.—	var. floribunda	June	.....	
S.—	D. scabra	July	Japan and China	Hardy and generally cultivated. Fls. white, tinged rose, erect clusters. Lvs. very rough.
	var. candidissima	.....	.....	Fls. double, pure white.
	var. crenata	.....	.....	Branches brown. Lvs. less rough.
	var. plena	.....	.....	Fls. double, tinged rose.
	var. Pride of Rochester	.....	.....	Fls. tinged rose.*
	var. Watereri	.....	.....	Fls. tinged red on outer surface.
D.—	D. Sieboldiana	.....	Japan.....	Fls. small, white. Minor value.
S.—	D. Vilmorinæ	.....	C. China.....	Hardy in sheltered position. Graceful, spreading stems. Fls. white, loose clusters.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Diervilla florida	.....	Korea.....	Small shrub; pale pink fls. As a garden plant the wild type is more desirable than any of its progeny.
S.—	var. venusta.....	.....	Korea.....	Hardy, rapid grower. Fls. rosy pink, in clusters, in greatest abundance. Earliest to flower.*
10–12′—	D. japonica.....	.....	Japan.....	Largest. Fls. rose-color, pale yellow, dark red, or nearly white on the same branch.*
S.—	D. præcox.....	.....	Japan.....	Large fls. of a rather disagreeable purple hue. Lemoine hybrids. Hardier and better than hybrids commonly grown here.
	var. Avant Garde....	.....	Fls. pale rose.	
	var. Conquérant.....	.....	Fls. rose.	
	var. Espérance	.....	Fls. pink.	
	var. Fleur de Mai....	.....	Fls. pink.	
	var. Floreal.....	.....	Fls. rose.	
	var. Gracieux	.....	Fls. pink and white.	
	var. Le Printemps* ..	.....		
	var. Seduction	.....	Fls. red.	
	var. Vestale.....	.....	Fls. white.	
T.—	Diospyros virginiana	.....	E. N. A.....	Perfectly hardy, fast-growing shapely tree. Lvs. thick and leathery, dark green and shining above and pale below. Frt. does not become sweet and succulent until after it has been touched by the frost.
S.—	Dipelta floribunda.....	.....	China.....	Fls. large and showy, Weigela-like. Hardy.
S.—	Dirca palustris.....	April	U. S. A.....	Valuable for its small but very early and abundant yellow fls. which appear before the lvs. Deserves a conspicuous position in all collections.
T.—	Elæagnus angustifolia.....	.....	S. and S. W. Europe, Asia Minor, S. W. Asia.....	Small tree. Fls. small, pale yellow, fragrant, axillary, almost hidden by lvs. These are long and narrow, like those of some Willows, and retain silvery white color during the season.
S.—	E. longipes.....	July	Japan.....	Fls. and frts. here profusely. Frt. hangs gracefully on long slender stems and is oblong, scarlet, lustrous and covered with small, white dots; tart and rather agreeable flavor; sometimes used in cooking.
S.—	Elsholtzia Stauntonii.....	Sept.	N. E. Asia.....	Fls. rosy pink, in long, erect spikes. Lvs. light green.
S.—	Enkianthus campanulatus..	.....	Japan.....	Tall shrub. Handsomest of the three species. Slender erect stems and branches. Fls. light yellow or rose-colored. Bright scarlet A. C. Garden plant of real value.
S.—	E. perulatus.....	.....	Japan.....	Smaller plants. Fls. smaller, yellow. Less valuable ornaments of the garden.
S.—	E. subsessilis.....	.....	Japan.....	
V.—	**Epigæa repens**.....	April	N. E. A.....	Difficult to cultivate.
S.—	**Erica carnea**.....	April	Alps of Central Europe.....	Fls. rosy red. One of the few perfectly hardy Heaths. Blooms in early spring; one of the first of the genus to fl. here.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	**Erica vagans**	.....	Europe	Cornish Heath. One of the true Heaths which can be grown in New England.
T.—	Eucommia ulmoides	.....	China	Hardy Rubber Tree. Lvs. thick, dark, lustrous, 5–6 in. long.
T.—	Euptelea Franchetii	.....	Japan, W. China	Promises to succeed.
T.—	E. polyandra	.....	Japan	Small tree with erect branches and pyramidal habit. Fls. open before lvs. Large, conspicuous orange-red anthers hanging on long slender filaments. Less desirable and less hardy than Cercidiphyllum.
T.—	Evodia Henryi	.....	W. China	Fls. small, pink, in small clusters. Lvs. dark, lustrous. Aromatic.
S.—	Evonymus alata	.....	E. Asia	Broad flat-topped shrub of open habit. Large, wide-spreading, rather compact, shrub with branches furnished with broad corky ridges. Inconspicuous fls. and frts. Habit and unusual clear rose A. C. are its chief claims. 10–12 ft. in diam.
S.—	E. Bungeana	.....	N. China	Small light pink frt. remains several weeks after lvs. fall. A. C. pale yellow.
S.—	var. semipersistens	.....	Probably Chinese	Broad shrub, 10–12 ft. high, with bright green lvs. which do not fall until Dec. Frt. inconspicuous.
S.—	E. europæa	.....	Europe	Shrub or small tree. Frt. dull red with orange seeds. Lvs. remain green till after frt. has colored.
50′—	E. lanceifolia	.....	W. China	Promises to be valuable. Bush or tree.
	E. radicans			
D.—	var. acuta	.....	W. China	Lies flat on ground.
V.—	var. vegeta	.....	N. Japan	Naturally a vine; can be grown as low broad bushes. Hardiest, handsomest and most desirable of all the forms of this useful plant which have been tried in the Arboretum. Frt. is produced on young plants in great abundance.
V.—	var. minima	.....	.....	Lvs. ¼ in. long.
S.—	E. yedoensis	.....	Japan	Shrub or small tree. Conspicuous for colored lvs. and brilliant frts.
12′—	Exochorda Giraldii	April	China	Perfectly hardy plant of first-rate importance. Produces larger and handsomer fls. than the well-known Pearl Bush of gardens.
S.—	var. Wilsonii	May	China	Fls. larger than E. racemosa and promises to be better plant.
S.—	E. macrantha (E. racemosa × E. Korolkowii).	.....	C. Asia	More upright growth than E. racemosa.
S.—	E. racemosa (grandiflora)	.....	China	Fls. white; showy racemes.
T.—	Fagus sylvatica			
T.—	var. bornyensis	.....	.....	Erect trunks, horizontal and pendulous branches. Handsome trees.
T.—	var. miltonensis	.....	.....	

Size	Name	Time of Flowering	Habitat	Remarks
	Fagus sylvatica			
T.—	var. pendula.... ...	.....	.....	One of most remarkable trees of abnormal growth. Wide-spreading and tent-like.
S.—	Forsythia europæa.....	April	Albania.....	Less beautiful than following. Rather rigid erect stems and branches.
	F. Fortunei (see F. suspensa, var. Fortunei).			
S.—	F. intermedia..... (F. suspensa × F. viridissima).	April	.....	General name for number of hybrids. Handsomer and perhaps hardier than parents.
S.—	var. pallida.....	April	.....	Fls. pale straw.
S.—	var. primulina.....	April	.....	Fls. pale primrose, in crowded clusters.
S.—	var. spectabilis.....	April	.....	Fls. deep, bright yellow, in profusion.*
S.—	F. suspensa.....	.....	China.....	Best suited for draping high walls.
S.—	var. Fortunei.....	.....	China.....	Now most generally used.
S.—	Fothergilla Gardenii.....	.....	S. E. U. S. A...	Small plant and a native of the coast region. Less hardy than the mountain species.
10–12′—	F. major.....	.....	S. E. U. S. A...	Fls. small, white, showy terminal heads before lvs. Lvs. resemble Hamamelis. A. C. light orange and red. Mountain species and very hardy.*
S.—	F. montana.....	.....	S. E. U. S. A...	Large, vigorous and very hardy shrub.
S.—	F. monticola.....	.....	S. E. U. S. A...	Mountain species and very hardy here.
T.—	Fraxinus americana.....	.....	N. A.....	Most valuable for timber.
T.—	var. subcoriacea	.....	Ohio.....	Faster grower; handsomer.
T.—	F. anomala.....	.....	.....	Not entirely hardy.
T.—	F. Biltmoreana.....	.....	S. Appalachian.	Branches densely pubescent.
S.—	F. Bungeana.....	.....	N. China.....	
	F. chinensis			
T.—	var. rhynchophylla...	.....	China.....	Small tree, not particularly shapely.
T.—	F. cuspidata.....	.....	S. W. U. S.....	Not hardy.
T.—	F. dipetala.....	.....	Mts. of Calif...	Not hardy.
T.—	F. excelsior.....	.....	Europe.....	One of the most important timber trees of world, but this and its var. miserable in N. E.
T.—	var. pendula.....	.....	.....	Grafted standard, forming umbrella head.
T.—	F. Greggii.....	.....	S. W. U. S.....	Not hardy.
T.—	F. longicuspis.....	.....	Japan.....	Shrub or small tree.
T.—	F. mandschurica.....	.....	N. E. Asia.....	Grows well for few years, then fails.
T.—	F. Ornus.....	.....	S. E. Europe...	Small tree. Never successful here. All right in Middle Atlantic States.
T.—	F. oregona.....	.....	Pacific Coast...	Large tree in West. Probably never will grow large here.
T,—	F. Paxiana.....	.....	W. China.....	Some specimens killed 1917–18.
T.—	F. pennsylvanica.....	.....	U. S. A.....	Smaller than F. americana. Not worth growing for shade or ornament.
T.—	var. lanceolata.....	.....	U. S. A.....	Not proper for street planting, as often used in West.
T.—	F. platypoda.....	.....	W. China.....	Has grown rapidly. Too recently planted to judge value.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Fraxinus potamophila	.....	Turkestan and Songaria.....	Most promising of exotic Ashes for ornamental tree.
T.—	F. quadrangulata.....	.....	Mississippi Valley.....	One of the noblest American trees. Prefers limy soil.
T.—	F. rotundifolia.....	.....	S. Europe and S. W. Asia...	Small tree, graceful drooping branches.
T.—	F. syriaca.....	.....	.....	Uninjured for 38 yrs. Killed to ground 1917–18.
T.—	F. texensis.....	.....	Texas.....	Established in Arboretum.
D.—	Gaultheria procumbens....	.....	N. A.....	Difficult to cultivate.
D.—	Gaylussacia brachycera....	.....	S. Pa., S. Del., S. W. Va.....	Only a few inches high. One of the rarest shrubs. Very hardy, adapting itself readily to cultivation. In the Arboretum grows as well in full exposure to the sun as it does in the shade.
S.—	Genista elata.....	.....	Europe.....	
S.—	G. germanica.			
S.—	G. pilosa.			
S.—	G. tinctoria.....	.....	Europe.....	To admire but not to plant. It may become a dangerous weed. First planted in Salem, has spread through Essex Co.
T.—	Ginkgo biloba.....	.....	China.....	This tree is very hardy; it grows rapidly; lives to a great age. Kernel of frt. delicate flavor.
T.—	Gordonia alatamaha.....	Oct.	Georgia.....	Fls. white, resembling Camellia. Last tree to bloom. A. C. orange and scarlet. Makes shrub in sheltered spot in Arboretum.
15′—	Halesia tetraptera.....	.....	S. U. S. A.....	Grows in low altitudes.
90′—	var. monticola.....	.....	S. U. S. A.....	Mountain form. Often free of branches to 60′. Fls. larger. Frt. twice as large. Every reason to believe will prove one of the handsomest flg. trees.
	Halimodendron halodendron.	June	Siberia.....	Called Salt-tree because it inhabits the saline steppes near the river Irtish. Fls. pale rose, pea-shaped, fragrant, in great abundance, in short clusters. In fl. during several weeks. Lvs. are clothed with a pale silky down.
S.—	Hamamelis mollis.....	Feb.	China.....	Fls. bright yellow, larger than those of the other species, remain for weeks in good condition. Hardy, fast growing. A. C. good.*
S.—	H. japonica.....	Feb.	Japan.....	Large, vigorous, and perfectly hardy shrub. Two forms, one of them blooming a few days before the other, about the middle of February. Uninjured by the severest cold. Excellent subject to plant in city yards.
S.—	H. vernalis	Jan.	S. Mo.	
S.—	H. virginiana.....	Oct.	N. A.....	Small clusters of fls. with long pale yellow strap-shaped petals. Fls. seem to cover the branches and form one of the most interesting features.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Hemiptelea Davidii	.....	N. China.....	Prickly Elm. No value as ornamental.
S.—	Hippophaë rhamnoides....	.....	Europe, Cent. Asia	Stays green late. Orange-colored, persistent frt. on female plant.
S.—	Holodiscus discolor.....	.....	W. of Rocky Mts.....	Near relative of the Spireas. Long drooping clusters of white flowers.
	Hydrangea arborescens.			
S.—	var. grandiflora.....	.....	U. S. A.....	Hardy, shapely shrub and produces large clusters of sterile white fls. in profusion. Good habit.
S.—	H. Bretschneideri.....	June	E. Siberia.....	Large, hardy shrub. First of the shrubby Hydrangeas to bloom.*
S.—	H. cinerea.....	.....	U. S. A.....	
S.—	H. paniculata.....	.....	Japan.	
	var. grandiflora.			
	var. præcox.....	July	.....	Fls. early.*
	var. tardiva.			
V.—	H. petiolaris.....	June	Japan.....	Best deciduous vine for brick or stone walls. Fls. white, broad heads. Lvs. bright. Plant on N. or E. side of bldg. Best.
S.—	H. quercifolia.....	July	S. U. S. A.....	Frequently winter-kills. Lvs. very handsome.
S.—	H. radiata.....	.....	U. S. A.....	As a foliage plant is the most beautiful of the American species. Fls. white, flat heads, ring of neutral fls. Lvs. dark, blue-green above, silvery below.
S.—	H. xanthoneura.....	June	China.....	Fl. earliest of all hardy Hydrangeas. Resembles H. Bretschneideri.
S.—	var. Setchuenensis ...	June	China.....	
S.—	var. Wilsonii.....	June	China.....	
D.—	Hypericum Buckleyi	.....	S. Appalachian	One of the gems of the genus. Dwarf plant growing here only a few inches high, but spreading into a broad mat which becomes covered with fls. Very rare in cultivation. Well suited for a sunny position in the rock-garden.
T.—	**Ilex Aquifolium**.....	.....	Europe.....	Not hardy in New England.
S.—	**I. crenata**.....	.....	Japan.....	Upright growing, sometimes a tall tree. After 25 yrs. was killed 1917–18.
S.—	I. decidua.....	.....	S. States.....	Frt. red.
5–6′—	**I. glabra**.....	.....	N. E. to Texas	Its compact habit and its shining persistent lvs. make it one of the very best of the broad-leaved evergreen shrubs which can be grown in this climate. Very hardy, yet slightly injured 1917–18.
S.—	I. lævigata.....	.....	E. U. S. A.....	Showy, as the frt. is large and bright-colored. Easily cultivated. Grows rapidly in ordinary garden soil. Round-headed shrub 8–10 ft. across.
S.	var. Herveyi.....	.....	.....	Yellow-fruited form.
S.—	I. monticola.....	.....	S. States.....	Deciduous. Red berries.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	**Ilex opaca**	.....	E. U. S. A.....	Only broad-leaved evergreen tree which is hardy in this latitude. Largest plants killed 1917–18, others survived.
20′—	**I. pedunculosa**	.....	Japan.....	Frt. red, handsome. Only small specimens here.
S.—	I. serrata	.....	Japan.....	Frt. is smaller and less bright-colored than that of I. verticillata.
S.—	I. verticillata	.....	E. U. S. A.....	Common plant. Round-headed shrub 8–10 ft. across.
S.—	Indigofera amblyantha....	July	Cliffs of Hupeh	Slender, erect stems. Fls. small, rose, in erect axillary clusters. Continues to produce its fl.-clusters until Oct. Lvs. small. One of the most beautiful of recent introductions. Perfectly hardy.
S.—	I. decora	July	China and Japan.	Large, pure white fls. More beautiful than I. Gerardiana. Killed back to the ground every winter, but sends up new stems and fls. profusely every year.
S.—	I. Gerardiana	July	Himalayas.....	Purple fls. Winter-kills but revives.
D.—	I. Kirilowii	July	Manchuria and Korea.....	Habit and foliage are excellent. Low leafy plant which spreads into a broad mass. Fls. pure pink, lasting several weeks. Exceedingly valuable garden plant.
3–4′—	I. Potaninii	June	N. China.....	Slender, erect branches. Fls. bright rose, in erect, spreading racemes, larger than I. amblyantha.
T.—	Juglans cathayensis.....	.....	China.....	Tree with splendid foliage and nuts resembling those of the American Butternut.
	Juniperus chinensis			
D.—	var. **Sargentii**.....	.....	Korea and Japan...	Low, dense mat; wide-spreading branches.*
	J. communis			
D.—	var. **depressa**.....	.....	N. E. U. S. A...	Dwarf form. Broad masses of stems ascending from prostrate base.
D.—	var. **depressa aurea**...	.....	.....	Yellow-tipped branches.
2′—	var. **montana**	.....	N. Hemisphere.	Most dwarf of prostrate forms.
D.—	**J. conferta**.....	.....	Japan.....	Long prostrate stems. Grows in sand.
D.—	**J. horizontalis**.....	.....	Maine to British Columbia....	Procumbent and prostrate stems.
D.—	var. **Douglasii**.....	.....	Michigan.....	Lvs. steel-blue, turning purple in autumn. Grows on sand-dunes of Lake Michigan.
D.—	**J. procumbens**.....	.....	Japan.....	Wide-spreading, procumbent stems. Lvs. blue-green.
	J. Sabina			
D.—	var. **cupressifolia**	.....	.....	Only a few inches high with small, spreading, prostrate stems.
D.—	var. **tamariscifolia**....	.....	.....	Vigorous prostrate shrub.
D.—	**J. squamata**.....	.....	Himalayas.....	Prostrate. Frt. dark purple-black.
	J. virginiana			
D.—	var.....	.....	Coast of Maine.	A form with branches spreading close to the ground.

Size	Name	Time of Flowering	Habitat	Remarks
	Juniperus virginiana			
S.—	var. globosa	.....	.....	Small, round, handsome shrub well worth a place in collections of these dwarfs.
S.—	var. tripartita	.....	.....	Low, broad shrub with spreading and erect branches forming a wide open head.
S.—	**Kalmia angustifolia**	.....	U. S. A.	Handsome dwarf shrub. Well deserves cultivation.
S.—	**K. carolina**	.....	Appalachians	Dwarf species recently discovered. Promises to be hardy.
S.—	**K. latifolia**	June	N. A.	For the northern states the most valuable of the broad-leaved evergreens which can be successfully grown in the open
S.—	var. alba	.....	.....	Fls. white. [ground.
S.—	var. fuscata	.....	.....	Fls. marked with chocolate band.
D.—	var. myrtifolia	.....	.....	Fls. minute. Dwarf form.
S.—	var. obtusata	.....	.....	Fls. rarely. Lvs. like Rhododendron.
S.—	var. polypetala	.....	.....	Corolla divided in narrow lobes.
S.—	var. rubra	.....	.....	Fls. nearly red. Lvs. dark.
S.—	**K. polifolia**	.....	U. S. A.	
S.—	var. microphylla	.....	U. S. A.	
T.—	Kœlreuteria paniculata	July	China	Small tree with large, pinnate lvs. and erect clusters of bright yellow fls. followed by conspicuous bladder-like frts. Well suited to withstand heat and drought, as well as cold.
4–6′—	Kolkwitzia amabilis	June	W. China	Fls. rose. Frt. hairy, crimson. Hardy and one of most beautiful recent introductions.
T.—	Laburnum Adamii (L. anagyroides × Cytisus purpureus).	.....	.....	Fls. dull purple, rarely yellow. More curious than beautiful.
T.—	L. alpinum	.....	Mts. of Cent. Europe	Large shrub or small tree blooming about two weeks later than L. vulgare. Perfectly hardy. Most desirable yellow-flg. large shrub in this climate.
20–30′—	L. anagyroides	.....	Europe	Not very hardy.
	var. bullatum	.....	.....	Lvs. curled and contorted. Unattractive.
	var. pendulum	.....	.....	Pendulous.
	var. quercifolium	.....	.....	Leaflets sinuately lobed.
	var. semperflorum	.....	.....	Produces second crop of fls. in autumn.
S.—	L. caramanicum	.....	Asia Minor	Small shrub, not hardy.
T.—	L. Parksii (L. anagyroides × L. alpinum).	.....	.....	Small, hardy tree. Most desirable yellow-flg. small tree in this climate.
	L. vulgare (see L. anagyroides).			
T.—	Larix americana	.....	E. N. A.	As ornamental tree most picturesque of all Larches.
	L. chinensis (see L. Potaninii).			
T.—	L. dahurica	.....	E. Siberia	
	L. decidua	.....	Europe	
T.—	L. Kaempferi	.....	Japan	Most rapid grower.
	L. leptolepis (see L. Kaempferi).			
T.—	L. occidentalis	.....	W. N. A.	Largest of genus.
T.—	L. Potaninii.			
T.—	L. sibirica	.....	E. Siberia	
S.—	**Ledum**	.....	N. A.	Hardy but difficult to cultivate.
D.—	**Leiophyllum buxifolium**	.....	Pine barrens N. J. & S.	Hardy but difficult.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	**Leucothoë Catesbæi**	.....	S. Appalachian.	One of the hardiest and most desirable of the broad-leaved evergreen shrubs. It needs rather moist soil and a shady position.
S.—	L. racemosa	.....	S. Appalachian.	Lvs. remain green until Nov.
T.—	**Libocedrus decurrens**	.....	Sierra Nev.	
S.—	Ligustrum acuminatum	.....	Japan	Broad shrub with large fl.-clusters near the ends of the stems. Frt. lustrous black like that of L. vulgare.
S.—	L. amurense	.....	E. Siberia	The branches terminate with large fl.-clusters. Pyramidal habit. Tall shrub with erect stems which form a narrow head.
S.—	L. ibota	.....	Asia	Broad shrub sometimes 10 ft. high, with spreading slightly recurved branches, small, dark green lvs. which turn purplish in autumn. Frt. in short nodding clusters, purplish black with pale bloom.
S.—	var. Regelianum	.....	.....	Lower and denser shrub. Large lvs. Horizontally spreading branches which form a broad flat-topped head. Seedlings of the variety are often identical with L. ibota.
S.—	L. ovalifolium	.....	China	Not perfectly hardy even in S. New England.
S.—	L. vulgare	.....	Europe	Tall, broad, shapely shrub. Fls. white, bad-smelling, cover shrub. Frt. lustrous, black, very decorative. Great value in frt. and lvs. that are retained in good condition till winter. Well suited for hedge plant. A variety with yellow frt. less beautiful.
S.—	var. foliolosa	.....	.....	Frt. larger. Lvs. narrower.
T.—	Liquidambar formosana	.....	Cent. China	Injured every winter.
T.—	L. styraciflua	.....	U. S. A.	Grows as far north as S. Conn.
S.—	**Loiseleuria procumbens**	.....	White Mts. & N.	Hardy but difficult.
S.—	Lonicera Altmannii	.....	Cent. Asia	Red frts.
S.—	L. amœna (L. tatarica × L. Korolkowii, var. floribunda)			{ Graceful shrubs. Fls. pink. Lvs.
S.—	L. Arnoldiana (L. tatarica × L. Korolkowii)			{ silvery.
S.—	L. bella (L. Morrowii × L. tatarica)	.....	.....	Large, vigorous hybrid. Fls. pale yellow. Frt. red, lustrous.
S.—	L. cærulea	.....	N. Hemisphere	Fls. small, yellowish. Frt. bright blue, ripens early. Attractive in habit.
S.—	var. graciliflora	.....	Cent. Asia	Slender, vigorous, beautiful. Fls. pale yellow, drooping.
S.—	var. gracilipes	.....	Turkestan	Slender and graceful.
S.—	L. canadensis	.....	N. E. N. A.	Fls. pale yellow.
S.—	L. chrysantha	.....	E. Siberia	One of the most conspicuous of the early-flg. species.
S.—	L. fragrantissima	.....	China	Fls. fragrant, in early spring before lvs. appear. Lvs. green until Nov. Not perfectly hardy.
V.—	L. Giraldii	June	China	Fls. wine-colored with white filaments and style. Lvs. long, narrow, dark.
S.—	L. gracilipes	.....	Japan	Pink fls.

Size	Name	Time of Flowering	Habitat	Remarks
V.—	Lonicera Heckrottii (L. sempervirens × L. italica?)	.....	.....	Believed to be a hybrid, probably of American origin. Fls. although not fragrant are very beautiful. Outer surface of the corolla deep rose; inner surface pale yellow.
V.—	L. Henryi	.....	China.....	Vigorous climbing plant. Has preserved its large dark green lvs. through the winter. Long. slender stems. Spreads over low bushes and rocks. Fls. open rose, turn orange-red, in axillary clusters. No perfume.
V.—	L. hirsuta	.....	.....	Eastern American species of climbing Honeysuckle. Compact clusters of bright red frts. surrounded by the cups formed by the union of the two upper lvs.
S.—	L. iberica	.....	Europe.....	Latest flowering. Pale yellow fls.
	L. involucrata			
S.—	var. serotina	July	Rocky Mts.....	Fls. long, slender, bright yellow, tinged with red, and surrounded by large, leaf-like dark red cups which remain under the large, black, lustrous frt.
	L. japonica.			
V.—	var. chinensis	.....	.....	More beautiful than Hall's. Distinguished by red color of young stems and lvs.
V.—	var. Halliana.			
S.—	L. Koehneana	.....	China.....	Large, hardy, vigorous shrub. Fls. yellow, tinged red on outside. Lvs. thick, yellow-green. Branchlets dark red-purple.
S.—	L. Korolkowii	.....	Cent. Asia.....	Graceful. Fls. pink. Lvs. silvery
S.—	var. floribunda.			[gray.
S.—	L. Ledebourii	July	Pacific Coast...	Fls. bright yellow, tinged red, surrounded by large leaf-like dark red cups which remain under large, black, lustrous frt. Lvs. green till Nov.
S.—	L. Maackii	.....	Amoor River...	Tall, narrow shrub. Fls. white and largest of any Bush Honeysuckle, very handsome. Frt. small, bright red, remains till winter. Lvs. dark. Hardy. Valuable decorative plant.
S.—	var. podocarpa	.....	C. China.....	Vigorous shrub, wide-spreading branches, open habit. Fls. are smaller and less beautiful. Frt. large, scarlet, lustrous, ripens in Oct. Lvs. remain green till Nov.
S.—	L. minutiflora (L. tatarica × L. Morrowii).	.....	Cent. Asia.....	Remarkable in the beauty of its brilliant, orange-yellow, translucent frt.*
S.—	L. Morrowii	.....	Japan.....	Broad, high bush with wide-spreading lower branches clinging close to the ground. Fls. yellow, in profusion. Frt. large, orange-red, very showy. Lvs. pale blue-green. Requires large space.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Lonicera muendeniensis.... (L. tatarica × L. Morrowii).	.....	.....	Fls. pale yellow. Frt. large, orange-red, lustrous.
S.—	L. multiflora (L. micrantha × L. Morrowii).	.....	.....	Frt. translucent, is perhaps the most beautiful of all the Honeysuckle frts.
S.—	L. muscaviensis..... (L. Morrowii × L. Ruprechtiana).	.....	.....	Large and translucent scarlet frts. Fls. yellow.
S.—	L. notha..... (L. tatarica × L. Ruprechtiana).	.....	.....	Fls. pale pink. Frt. orange-red, lustrous. Best planted as isolated specimen.*
S.—	L. orientalis.....	.....	S. E. Europe...	Frt. is black and lustrous.
D.—	L. pileata.....	June	China.....	Prostrate stems form a compact mat. Fls. small, pale yellow, very fragrant. Killed to ground 1917–18.
V.—	L. prolifera.....	.....	E. N. A.....	Eastern American species of climbing Honeysuckle. Frt. bright red, clusters, surrounded by cups formed by union of the two upper lvs.
V.—	L. prostrata.....	.....	China.....	Hardy and free-growing, with prostrate stems. Fls. small white, fade yellow. Frt. orange-red. Lvs. small, oval, bluish green.
S.—	L. quinquelocularis.			
S.—	L. Ruprechtiana.....	.....	.....	Fls. large, yellow. Lvs. narrow.
2–3′—	L. saccata.....	.....	China.....	Fls. pale yellow, not conspicuous. Frt. bright scarlet, translucent,
S.—	L. segreziensis ..... (L. quinquelocularis × L. xylosteum). L. similis.	.....	.....	Fls. white. [showy.
V.—	var. Delavayi.....	.....	.....	Killed 1917–18.
S.—	L. Standishii.....	.....	China.....	Fls. fragrant, in early spring before the lvs. appear. Lvs. green until Nov. Not perfectly hardy in N. E.
S.—	L. syringantha.....	.....	W. China.....	Graceful arching branches. Fls. violet, sweet scented. Garden plant of real value.
S.—	var. Wolfii.....	.....	W. China.....	Fls. purple, in small clusters,
S.—	L. tangutica.....	.....	W. China.....	Fls. pink, small. [fragrant.
10′—	L. tatarica.....	.....	.....	Vigorous, as broad as tall. Fls. white, pale yellow, pink, and rose. Frt. yellow and red.
S.—	var. lutea.....	.....	.....	Frt. bright yellow.
S.—	var. rosea.....	.....	.....	Frt. scarlet.
D.—	L. thibetica.....	.....	W. China and Thibet	A low plant with slender, spreading branches.
V.—	L. tragophylla.....	.....	China.....	In habit and general appearance resembles the Woodbine of Europe. Fls. golden yellow.
S.—	L. trichosantha.....	.....	N. and C. China	Erect stems. Fls. large, yellow and white. Frt. bright red.
S.—	L. utahensis.....	.....	N. W. N. A....	Fls. pale yellow.
S.—	L. Xylosteum.....	.....	Europe and N. Asia.....	Frt. large, dark crimson, lustrous. Lvs. held late.
S.—	L. xylosteoides..... (L. tatarica × L. Xylosteum).	.....	.....	Fls. white. Frt. large, red.
V.—	Lycium chinense.....	.....	.....	Useful for draping walls. The scarlet shining frts. add greatly to the autumn beauty of this hardy plant.

Size	Name	Time of Flowering	Habitat	Remarks
	Lyonia (see Pieris).			
S.—	L. mariana	.....	.....	Small shrub. Fls. white, racemose, on leafless shoots. Common in East. Not particular about soil or situation.
S.—	L. ligustrina	.....	E. N. A.	Bright scarlet A. C.
T.—	Maackia amurensis	July	E. Siberia	Every way inferior to its American relative, Cladrastis lutea. Reddish bark. Fls. creamy white, in erect spikes, inconspicuous. Of little ornamental value.
T.—	M. hupehensis	.....	C. China	Has not yet fld. here. Growing well.
S.—	Maddenia hypoleuca	May	China	Fls. without petals, in short clusters. Frt. small, black, cherry-like. Related to Chokecherry.
T.—	Magnolia acuminata	.....	E. N. A.	Fls. small, yellow-green, not very conspicuous. Hardy, fast-growing tree of rather formal pyramidal habit.
	M. conspicua (see M. denudata).			
T.—	M. cordata	May	Georgia	Small round-headed tree. Fls. small, cup-shaped, bright canary-yellow.
T.—	M. denudata	.....	China	Yulan Magnolia. One of the most beautiful of all early-flg. trees. Fls. frequently touched by late frost.
T.—	M. Fraseri	.....	Appalachian Mts.	Earliest American species to fl. Fls. creamy, sweet-scented, 8–10 in. diam. Open habit. Comparatively small tree. Perfectly hardy.
T.—	M. glauca	.....	E. U. S. A.	Perfectly hardy, easily cultivated, One of the most beautiful of the small trees which can be successfully grown in this part of the United States. Fls. white, fragrant. Frt. scarlet. handsome.*
T.—	M. grandiflora	.....	S. E. U. S. A.	Not hardy.
T.—	M. Kobus	.....	Japan	
T.—	var. borealis	.....	Japan	Much less valuable ornamental plant than the Chinese M. conspicua. Large, hardy, fast-growing.
T.—	M. liliflora	.....	China	
T.—	M. macrophylla	.....	S. E. U. S. A.	Medium-sized tree, symmetrical habit. Fls. often 12 in. wide, creamy white marked with dark red spot at base, inside. Lvs. often 30 in. long. Wide-spreading branches forming a broad, round-topped head. Perfectly hardy. Plant it in sheltered positions for the lvs. are easily torn by the wind.
T.—	M. major (M. glauca × M. tripetala).	.....	.....	A handsome plant with the general appearance of M. glauca. Fls. larger, fragrant. Less hardy than either parent.
T.—	M. pyramidata	.....	Alabama and Florida	Not hardy at the North.

Size	Name	Time of Flowering	Habitat	Remarks
	Magnolia salicifolia		Japan	Killed 1917–18.
T.—	M. Soulangeana (M. conspicua × M. denudata).			
T.—	var. Alexandrina			
T.—	var. Lennei			
T.—	var. Norbertiana			
T.—	var. speciosa			
S.—	M. stellata		Asia	Fls. white. Form with pink fls. Perfectly hardy, usually free-flowering and very desirable [shrub.
	M. Thompsoniana (see M. major).			
T.—	M. tripetala		E. U. S. A.	Umbrella tree. Fls. large, white, fragrant. Lvs. large.
	M. Wilsonii		China	Killed 1917–18. [like
S.—	Mahonia Aquifolium	May	N. W. U. S. A.	Fls. yellow. Frt. blue. Lvs. holly-
S.—	M. japonica			} Live but unsatisfactory here.
S.—	M. pinnata			}
D.—	M. repens		S. Rocky Mts.	Only a few inches high. Lvs. lighter green and less lustrous than M. Aquifolium. Perfectly hardy; promises to be one of the best evergreen ground-covers.
T.—	Malus, var. pendula			Pendulous form of common Apple, more curious than beautiful.
T.—	M. angustifolia		S. E. U. S. A.	Hardy. Last to fl. Fls. deeper pink than other American species.
T.—	M. Arnoldiana (M. floribunda × ———).			Fls. pink. Fls. and frt. larger than M. floribunda.*
T.—	M. atrosanguinea (M. floribunda × ———).			In brightness of color not surpassed.
T.—	M. baccata	May	Manchuria	Tall, narrow tree. Fls. white, on long, drooping stems. Frt. yellow, not much larger than pea. Hardy and handsome tree.
T.—	var. Jackii	May	Korea	Fls. pure white, 2 in. diam. Frt. deep crimson, lustrous, on long, drooping stems.
15′—	var. mandshurica	May	N. E. Asia	Fls. large, white, fragrant. Early bloomer. Frt. yellow or red.
T.—	M. cerasifera (M. baccata × M. prunifolia?)	May		Give good room for development. Fls. pure white, fragrant. Frt. [globose, dull red.
T.—	M. coronaria		E. U. S. A.	
T.—	M. Dawsoniana (M. fusca × apple tree).			Vigorous tree with the peculiar oblong yellow frt. of its American parent.
T.—	M. florentina (cratægifolia)			Small tree with much-lobed lvs. like those of the European Hawthorn. Fls. small, white. Frt. small, bright red.
T.—	M. floribunda		Asia	Handsomest and most satisfactory of all flg. trees. As it reaches maturity it assumes a picturesque habit. Broad shrub with a trunk divided at the base into several large stems. Fls. deep rose-color in the bud, turn white before the petals fall and are produced in the greatest profusion. Dark green foliage is handsome. Frt. yellow or orange, size of peas; make little show; devoured by birds.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Malus fusca	.....	N. W. Coast...	Frt. yellow, yellow-green, often flushed red, and occasionally red.
T.—	M. glaucescens	.....	W. N. Y. and Ontario.....	Tree-like shrub or small tree.
T.—	M. Halliana	.....	China.....	Type recently discovered. Fls. single, rose.
T.—	var. Parkmanii	.....	.....	Small shapely tree. Fls. double, rose-red. Frt. size of pea, red.*
T.—	M. ioensis	.....	Miss. Valley...	
T.—	var. Bechtel Crab	.....	.....	Fls. double, pale pink, look like small clustered roses; greatest profusion. One of the most charming of all hardy flowering trees. Last crab apple in the collection to bloom.*
T.—	M. micromalus (M. baccata × M. spectabilis?)	.....	.....	Pyramidal habit. Fls. small, pale pink. Frt. light yellow. A rare plant.
T.—	M. Niedzwetzkyana	.....	Turkestan.....	Remarkable in the red color of the fls., branches, lvs. and frt. Small tree. One of the first apples to bloom.
T.—	M. prunifolia	.....	China.....	Fls. like common apple.
T.—	var. rinki	.....	China.....	Fls. like common apple. Frt. greenish yellow, sometimes with reddish cheek, rarely red, 1¼ in. diam., juicy and acid.
	M. Ringo (see M. prunifolia, var. rinki).			
D.—	M. Sargentii	.....	Japan.....	Low wide bush, native of salt marshes. Excellent plant for small gardens. The only shrub apple which is now known. A valuable late-flowering plant. Buds dark rose. Fls. white with pink tinge. Frt. small, red, wine-colored, or yellow.
T.—	var. arborescens	..	.....	Tree form. Long horizontal branches.
T.—	M. Scheideckeri (M. spectabilis × ———).	.....	.....	Branches are erect and slightly spreading, forming a narrow pyramidal head. Fls. pink and white, in profusion. Frt. yellow, ¾–1 in. diam.
S.—	M. Sieboldii	May	N. China and Japan.....	Last of Asiatic species to fl. Low, dense shrub, spreading. Fls. small, white tinged rose. Frt. small, yellow. Really a dwarf form of var. arborescens.
30′—	var. arborescens	.....	Korea and Japan	Ascending, wide-spreading branches. Fls. small, immense quantities, late bloomer. Frt. yellow or red, minute.
T.—	var. calocarpa	.....	Japan.....	Broad shrub or small tree. Fls. pink and white, 1 in. diam. Frt. brilliant scarlet, very beautiful.
T.—	M. Soulardii (M. ioensis × common apple).	.....	Miss. Valley...	
20–30′—	M. spectabilis	.....	N. China.....	Probably hybrid. Pyramidal habit. Fls. large, pink, semi-double. Frt. pale yellow, ¾-in. diam.
T.—	var. Riversiana	.....	.....	River's Crab. Best form.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Malus theifera	May	C. and W. China	Zig-zag branches. Fls. rose in bud, almost white. Frt. small. "Red tea" made from lvs.
	M. toringo (see M. Sieboldii).			
T.	M. Zumi	.....	Japan	Slender tree. Fls. pink and white.
S.—	Morus acidosa	May	E. Asia	Fls. smaller than other mulberries. Frt. black, lustrous, pleasant subacid flavor; great quantities.
T.—	M. alba	.....	Asia	Russian Mulberry. Larger and hardier than our native M. rubra.
T.—	var. tatarica	.....	.....	Weeping form.
S.—	Myrica carolinensis	.....	.....	Common Bayberry of North. Lvs. hold late.
S.—	M. cerifera	.....	S. E. U. S.	Wax Myrtle.
S.—	Neillia affinis	.....	China	Not yet flowered in Arboretum. Fls. pink.
S.—	N. sinensis	.....	W. China	Interesting plant related to spireas. Tall, handsome, hardy. Fls. clear purple in racemes. Lvs. light, incisely cut.
S.—	N. longeracemosa	.....	China	Not yet flowered in Arboretum. Fls. pink.
S.—	Nemopanthes mucronata	.....	N. E. N. A.	Fls. inconspicuous. Frt. red, showy on female plant in July.
T.—	Nyssa sylvatica	.....	Maine to Florida	A. C. unsurpassed by any native tree. Only small plants can be moved.
30′—	Oxydendrum arboreum	Aug.	E. N. A.	Sorrel Tree. Fast-growing, late-flowering, with handsome fls. Foliage splendid in the autumn. Saved apparently by its acid juices from the attacks of insects. This tree is too little known. Perfectly hardy.
D.—	**Pachistima Canbyi**	.....	W. Va.	
12″-18″—	P. myrsinites	.....	Rocky Mts.	Less hardy than P. Canbyi.
S.—	Panax sessiliflorum	.....	E. Siberia	Fls. small, inconspicuous, borne in globose, compact terminal heads. Frt. black, showy. Lvs. dark, divided. Large, hardy and vigorous shrub.
S.—	Parrotia persica	.....	Trans-Caucasus and Persia	Broad, round-headed shrub, with erect stems and lvs., which in shape resemble those of the native Witch Hazel. A. C. splendid, clear yellow, orange and red.
V.—	Parthenocissus quinquefolia	.....	N. A.	Often sold in nurseries as Ampelopsis Engelmannii.
V.—	var. hirsuta	.....	.....	Young branches, tendrils and lvs. are covered with soft down.
V.—	var. Saint Paulii	.....	Illinois and Missouri	Attaches itself to walls and grows rapidly.
V.—	P. vitacea	.....	.....	Cannot attach itself to trees or walls. Brilliant A. C.
V.—	Periploca græca	.....	.....	Tall, vigorous vine. Fls. green and brown.
V.—	P. sepium	.....	Korea	Slender stems. Fls. long-stalked, sepals dark brown, conspicuous. Lvs. small, dark, very lustrous.
T.—	Phellodendron amurense	.....	E. Siberia	A. C. clear yellow, early.
T.—	P. chinense	.....	C. China	

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Phellodendron sachalinense.	.....	E. Asia.....	Small tree. Fls. yellow, inconspicuous. Frt. black, berry-like. Bright yellow wood and roots. All parts of these trees are permeated with a fragrant aromatic oil which apparently makes them immune from the attacks of insects. Tall, straight trunk. Wide-spreading branches forming a shapely flat-topped head. Good subject to plant in narrow streets.*
S.—	Philadelphus coronarius....	.....	S. E. Europe...	Fls. small, creamy white, fragrant. Still one of the best garden plants of genus.
S.—	var. salicifolius.....	.....	.....	A distinct and interesting plant.
S.—	P. Falconeri.....	.....	China and Japan	Fls. delicate, white.
S.—	P. floridus.....	.....	S. Appalachians	
	P. grandiflorus (see P. pubescens).			
S.—	P. hirsutus.....	June	S. Appalachians	Tall shrub of rather open habit. Fls. small, early, of no great ornamental value.
6′—	P. inodorus.....	.....	S. Appalachians..	Fls. white, large, solitary, scentless. Although still little known, one of the most distinct and beautiful of the genus.
S.—	P. insignis.....	.....	.....	Souvenir de Billard one of first hybrids. Last to bloom.*
	P. latifolius (see P. pubescens).			
5′—	P. Lemoinei.....	June	.....	First of Lemoine's hybrids.
	(P. coronarius × P. microphyllus).			
6′—	var. Avalanche*.....	.....	.....	Partial list of Lemoine hybrids. Some of uncertain origin. Interesting and beautiful plants.
	var. Boule d'Argent...	.....	.....	
	var. Bouquet Blanc...	.....	.....	
6′—	var. Candelabre*.....	.....	.....	
	var. Conquete.....	.....	.....	
	var. erectus*.....	.....	.....	
	var. Fantasie*.....	.....	.....	
	var. Gerbe de Neige*.	.....	.....	
	var. Manteau d'Hermine.....	.....	.....	
	var. Mont Blanc*....	.....	.....	
	var. Nuée Blanche....	.....	.....	
	var. Pavillon Blanc...	.....	.....	
	var. Perle Blanche ...	.....	.....	
	var. rosea.....	.....	.....	
S.—	P. Magdalenæ	.....	C. China.....	Fls. white, fragrant, in drooping leafy panicles. Lvs. small, dark.
30′—	P. maximus.....	.....	.....	Largest of all the Mock Oranges. In old gardens near Boston this plant sometimes grows to a height of 30 ft.
	(P. latifolius × P. tomentosa?).			
3–4′—	P. microphyllus.....	June	Colorado.....	Not one surpasses it in delicacy and in the fragrance of its small fls.
S.—	P. pekinensis.....	.....	N. China.....	Low broad, compact bush. Fls. small, tinged yellow, cover bush.
20′—	P. pubescens.....	.....	S. Appalachians..	Fls. large, slightly fragrant, in small racemes.
S.—	P. purpurascens.....	July	China.....	Large, vigorous shrub. Fls. white, [purple calyx, fragrant.
	P. Schrenkii			
S.—	var. Jackii.....	June	Korea.....	Hardy shrub with erect stems. Fls. rather small. Blooms early. No special value.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Philadelphus sericanthus	.....	Asia.....	More open habit and later to fl. than P. pekinensis.
S.—	P. splendens (P. grandiflorus × ———).	.....	.....	Large, vigorous shrub. Fls. unusually large, scentless.
S.—	P. tenuiflorus	.....	E. Siberia.....	
T.—	Photinia villosa	June	E. Asia.....	Small tree or arborescent shrub. Fls. white, in profusion. Frt. bright scarlet. Lvs. thick, dark. A. C. brilliant.
S.—	var. lævis	June	E. Asia.....	Tall shrub, slender, spreading branches. Frt. handsomer and more abundant than type.
T.—	Picea Abies	.....	Europe.....	Norway Spruce. Fast-growing, hardy tree. Dies at the top when 30–40 yrs. old.
D.—	var. Clanbrasiliana	.....	.....	Seldom more than 6 ft. high.*
1–2′—	var. Gregoryana	.....	.....	Sub-globose.
D.—	var. nana	.....	.....	Very good dwarf.
D.—	var. prostrata*	.....	.....	Interesting plant.
D.—	var. pumila	.....	.....	Exceedingly dwf. habit.
D.—	var. pygmæa	.....	.....	Exceedingly dwf. habit.
T.—	P. bicolor	.....	Japan.....	Probably handsomest Spruce we can grow. Better specimens can be seen in New England than in Europe.*
T.—	P. glauca (canadensis)	.....	N. N. A.....	Grows rapidly and is very handsome for about 30 yrs.
T.—	P. Engelmannii	.....	Colorado.....	Early promise of this not realized. Specimens in Arboretum now [dying.
	P. excelsa (see P. Abies).			
T.—	P. Glenhii	.....	N. Japan and Saghalien....	In Arboretum 22 yrs. Show no signs of failure.
T.—	P. jezoensis	.....	E. Asia.....	Has not succeeded well in Arboretum though large specimens at Warren, R. I.
T.—	P. mariana	.....	N. N. A.....	Black Spruce.
S.—	var. Doumetii	.....	.....	Compact pyramidal plant which does not often grow more than 10–12 ft. tall and is of bluish color.
T.—	P. omorika	.....	Balkans.....	Narrow, rather compact pyramid. Grows rapidly. Promises to be valuable. Weevil.
T.—	P. obovata	.....	Siberia.....	Well established in Arboretum.
T.—	P. orientalis	.....	Caucasus.....	Hardy here. Valuable ornamental tree not unlike in general appearance the Red Spruce, P. rubra. Weevil.
D.—	var.	.....	.....	Dwarf of the preceding.
T.—	P. Menziesii	.....	.....	It is probable that this tree will not much longer retain its popularity.
D.—	var.	.....	.....	Promises to be valuable.
T.—	P. pungens	.....	Rocky Mts.....	Quickly loses value as ornamental tree.
D.—	var. compacta	....	.....	Good dwarf form, little known.
T.—	P. rubra	.....	Appalachians..	Difficult to establish. Injured 1917–18.
T.—	P. Sargentiana	.....	W. China.....	Injured 1917–18.
T.—	P. Schrenkiana	.....	Cent. Asia.....	Hardy and healthy in Arboretum but will probably never be important.
T.—	P. sitchensis	.....	N. W. Coast...	Not hardy here.

Size	Name	Time of Flowering	Habitat	Remarks
	Pieris (see Lyonia).			
S.—	P. floribunda	April	S. Appalachian	Very hardy. One of the best broad-leaved evergreen shrubs which can be grown here. Broad, low, rounded head. Fls. creamy white. Lvs. dark.
S.—	P. japonica	.....	.....	Hardy plant with handsome foliage. Fls. large, white, clusters.
T.—	Pinus Armandi	.....	W. China	Weevil.
T.—	P. ayacahuite	.....	Mexico	Injured 1917–18.
T.—	P. Banksiana	.....	N. E. and North	
T.—	P. Bungeana.			
T.—	P. cembra	.....	.....	Very slow growing. Hardy.
T.—	P. densiflora	.....	Japan	In Arboretum 30 yrs. Promises well.
6′–8′—	var. pumila	.....	.....	Much cultivated in Japanese gardens. Forms a head of spreading branches 10–12 ft. through. Perfectly hardy.
D.—	var. umbraculifera	.....	.....	Handsomest dwarf conifer in Arboretum.
	P. echinata	.....	E. U. S. A.	Injured 1917–18.
T.—	P. excelsa	.....	Himalaya	Never satisfactory here. Weevil.
T.—	P. flexilis	.....	.....	Grows slowly and probably will never be large or important in this climate.
T.—	P. Jeffreyi	.....	W. N. A.	
T.—	P. koraiensis	.....	Siberia, Korea, Manchuria	
T.—	P. Lambertiana	.....	Calif. Sierras	Largest of all pine trees. Gives little promise here of ever becoming a large or valuable tree.
T.—	P. montana	.....	Europe	
S.—	var. Mughus	.....	.....	Mugho Pine. Form of P. montana. Broad shrub with numerous erect stems occasionally reaching the height of 15 ft. and covered with dark green foliage.
S.—	var. pumilio			
T.—	P. monticola	.....	W. Coast	Successful here.
T.—	P. nigra	.....	Europe	Austrian Pine grows fast, short-lived.
T.—	P. parviflora	.....	Japan	In Arboretum 30 yrs. Promises well.
T.—	P. pentaphylla	.....	Japan	Well established in the Arboretum.
T.—	P. peuce	.....	Balkans	Hardy.
T.—	P. ponderosa.			
T.—	var. scopulorum			
T.—	P. pungens	.....	E. N. A.	
T.—	P resinosa	.....	E. N. A.	
T.—	P. sinensis	.....	N. China	Growing well. Appears hardy.
	var. denudata			
	var. yunnanensis			
T.—	P. Strobus			
D.—	var.	.....	.....	Dwarf forms.
T.—	P. sylvestris	.....	.....	Scotch Pine. More pyramidal in habit than forms of the white pine. Life here is usually not more than 30–40 years.
T.—	P. Thunbergii	.....	Japan	In Arboretum 30 yrs. Promises well.
T.—	P. virginiana	.....	E. N. A.	

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Platanus acerifolia	.....	.....	Grown as P. orientalis in U. S. Origin unknown. Excellent for street planting. A noble tree.
T.—	P. orientalis	.....	S. E. Europe and Asia Minor	Lvs. more divided than P. acerifolia. Specimen in Arboretum only a small bush and winter-kills often.
T.—	Populus adenopoda	.....	China	Lvs. of Chinese Poplars tinged red when young, makes them attractive. All are hardy and fast growing except P. lasiocarpa.
T.—	P. alba	.....	Europe	Useful for exposed positions.
T.—	P. canescens	.....	Europe	Useful for exposed positions.
T.—	P. lasiocarpa	.....	China	Suffered 1917–18.
80′—	P. Maximowiczii	.....	E. Asia	Recommended for planting in N. states. Often confused with P. suaveolens.*
T.—	P. Sieboldii	.....	China	
T.—	P. Simonii	.....	E. Asia	Small tree.
T.—	P. suaveolens	.....	E. Asia	
T.—	P. szechuanica	.....	China	
80′—	P. tomentosa	.....	E. Asia	Only propagated by grafting.
	P. tremula.			
T.—	var. Davidiana	.....	China	
T.—	var. tomentella	.....	China	
T.—	P. Wilsonii	.....	China	
T.—	P. yunnanensis	.....	E. Asia	Suffered 1917–18.
	P. fruticosa	.....	.....	Excellent plant for small garden.
S.—	var. dahurica	.....	E. Siberia	Excellent plant for small garden. Fls. white, look like miniature roses.
S.—	var. Friedricksenii	.....	.....	Handsomer than P. fruticosa.
S.—	var. ochroleuca	.....	.....	Fls. yellow.
D.—	var. Veitchii	.....	.....	Fls. white, free-blooming.
D.—	P. tridentata	July	E. N. A.	Excellent for rock-garden. Fls. white.
S.—	Prinsepia sinensis	.....	N. China	Fls. small, axillary, bright yellow, produced in profusion. One of the earliest shrubs to expand its bright green lvs. Branches arching and spiny.
S.—	P. uniflora	.....	China	Fls. small, white. Not much beauty.
T.—	Prunus alleghaniensis	.....	S. Conn. and W. Penn.	Frt. blue. Considerable ornamental value.
T.—	P. americana	.....	E. U. S. A.	
	P. Armeniaca.			
T.—	var. Mikado	.....	.....	Small tree, erect branches. Form of common Apricot. Handsome and satisfactory.
T.—	P. canescens	.....	.....	Fls. small, purple-rose, very fragrant, before lvs. Great beauty in bark, dark, very lustrous.
T.—	P. cerasifera	.....	Caucasus	Myrobalan Plum.
3–4′—	P. concinna	May	Mts. C. China	Tree-like in form. Fls. before lvs., white with wine-colored calyx. Earliest to bloom. Less valuable than P. subhirtella.
T.—	P. Conradinæ	.....	W. China	Always delicate. Killed 1917–18.
T.—	P. dasycarpa	.....	Manchuria	Purple or Black Apricot.
S.—	P. Davidiana	.....	China	Not of great importance as a garden plant here.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Prunus dehiscens	May	W. China	Small, spiny shrub. Fls. pale pink before lvs. Frt. small, compressed, hairy.
	P. fruticosa			
T.—	var. reflex	.....	Europe	Handsome small tree, drooping branches.
T.—	P. hortulana	.....	S. Ill. to Okla.	Round-topped tree, wide-spreading branches. Fls. small, before lvs. Frt. globose, scarlet, lustrous, like large cherry. Forms are distributed as fruit trees. Handsomest of American plum trees.
T.—	P. incisa	May	Japan	Large shrub or small tree. Fls. white, rarely pale rose, before lvs. Calyx showy and remains on young frt. some time.
T.—	P. Lannesiana	.....	Japan	Poor, short-lived. Injured 1917–18.
T.—	P. Maackii	June	.....	Fls. small, white, erect clusters. Frt. small, black. Birch-like bark, bright orange.
T.—	P. mandschurica	May	.....	Sometimes considered var. of common Apricot, but distinct in appearance. Fls. tinged rose calyx deep red. Frt. yellow, spotted red, sweet, succulent, flesh inferior to cultivated forms. Very hardy.
T.—	P. Maximowiczii	.....	Japan	
T.—	P. Munsoniana	.....	Miss. Valley	
T.—	P. nigra	.....	British America	Most northern of the American plum trees. Small tree with dark, rough bark. Fls. slightly tinged with pink and becoming rose-color in fading. Valuable on account of its hardiness, early appearance of the fls. and the early ripening of the frt. Fls. and frt. larger than P. americana. Desirable. Canada Plum.
T.—	P. orthosepala	.....	Kansas	Attractive when in fl. Very hardy. Fruit handsome.
	P. Padus			
T.—	var. commutata	.....	E. Asia	Arborescent shrub or small tree. Fls. pure white, in long, pendant racemes, very fragrant. Frt. not known here. Incorrectly distributed as P. Maackii. Lvs. before any other tree in E. Mass.*
	Prunus pendula (see. P. subhirtella, var. pendula).			
	var. ascendens (see P. subhirtella, var. ascendens).			
T.—	P. persicoides	April	.....	Hybrid (peach and almond). Fls. pale pink, uninjured by cold.*
T.—	P. pilosiuscula	.....	.....	Chief value is early bloom.
T.—	P. salicina	.....	E. Asia	Origin of so-called Japanese plums.
	P. Sargentii (see P. serrulata, var. sachalinensis).			
	P. serotina			
T.—	var. pendula	.....	N. A.	Weeping form occasionally cultivated.

Size	Name	Time of Flowering	Habitat	Remarks
	Prunus serrulata			
T.—	var. sachalinensis	.....	Japan	Most beautiful of all flg. cherries. Large, hardy tree, 80′ in Japan. Fls. large, pink or rose, in great abundance. Lvs. dark. A. C. orange and red. Bark smooth, red-brown, lustrous. Formerly called P. Sargentii.*
T.—	var. albo-rosea	.....	.....	Buds rose. Fls. large, double, white.
T.—	var. fugenzo	.....	.....	Fls. double, rose-pink, English call it James H. Veitch.
T.—	var. pubescens	.....	.....	Smaller than var. sachalinensis. Fls. open a week earlier, smaller.
T.—	var. spontanea	.....	.....	Similar to var. pubescens, fls. slightly rosier.
T.—	P. Simonii	.....	N. China	Called Apricot Plum. Frt. red, sweet, fair quality. Short lived, would grow only as curiosity.
10–15′—	P. subhirtella	May	Japan	Fls. pink, greatest profusion. Broad, shrubby plant, not known wild.
T.—	var. ascendens	May	Japan	Often called Prunus subhirtella. One of the most beautiful of early spring-flg. trees.
S.—	var. autumnalis	.....	.....	Fls. semi-double. Blooms both spring and autumn.
T.—	var. pendula	.....	Japan	Long, slender, pendulous branches which are covered with small pink fls. before the lvs. expand. Plants produced by grafting at the ground-level grow to a larger size, live longer, and when in fl. look like fountains of pink mist.
S.—	P. tomentosa	May	China	Broad vigorous shrub of excellent habit. Buds pink. Fls. white with red stalks and calyx. Frt. small, hairy, scarlet, sweet and good flavor.
S.—	var. endotricha	May	W. China	Later blooming than type.
S.—	P. triloba	.....	China	Tall shrub, irregular growth. Fls. pink, in profusion, single, 1 in. diam., appear before lvs. Should be better known.
	var. plena	May	China	Common garden plant. Fls. double.
	P. virginiana			
T.—	var. leucocarpa	.....	.....	Frt. large, light yellow, translucent and of better flavor than common choke-cherry.
T.—	P. Watsonii	.....	Kansas	Fls. attractive. Frt. handsome. Very hardy.
T.—	P. yedoensis	.....	Japan	Small tree. Origin uncertain. Fls. pink and white. Hardy, but buds killed sometimes.*
T.—	Pseudolarix amabilis	.....	China	Deciduous lvs. Interesting, beautiful and hardy tree.
T.—	Pseudotsuga taxifolia	.....	W. U. S. A.	Douglas Spruce. Colorado form is hardy here. Can be counted among the most beautiful conifers in the world.
	Pyrus (see Aronia; Chænomeles; Malus).			
T.—	P. amygdaliformis	.....	Caucasus	
T.—	P. auricularis (malifolia) (P. communis × Sorbus Aria).	.....	Caucasus	Natural hybrid. Fast grower.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Pyrus betulæfolia	.....	China.....	Tall, narrow tree. Lvs. pale. Has blight.
T.—	P. Bretschneideri.....	May	China.....	Fls. large. Frt. yellow, globose, good flavor. Lvs. large, lustrous.
T.—	P. Calleryana.....	.....	W. China.....	Shapely, pyramidal tree. Raised from seed collected by Wilson. Fls. pale pink. Frt. small. Believed most resistant of pears to blight.
T.—	P. communis	May	Europe.....	Parent of common garden pears.
T.—	P. elæagrifolia.....	May	S. E. Europe...	Lvs. silvery when unfolding.
T.—	P. Michauxii	.....	Caucasus.....	
T.—	P. ovoidea.....	May	China.....	Handsomest, earliest to bloom. Frt. yellow, juicy, large at base, tapering to apex. A. C. brilliant scarlet. Apparently free from blight.*
T.—	P. parvifolia.....	.....	Caucasus.....	
T.—	P. pashia	May	China.....	
T.—	P. phæocarpa.....	.....	China.....	Frt. small, brown.
T.—	P. salicifolia.....	.....	Caucasus.....	
T.—	P. serotina.....	.....	W. China.....	Not attractive.
T.—	P. serrulata.....	May	W. China.....	Fast-growing. Fls. large, sparse. Frt. brown. Apparently free from blight.
	P. Simonii (see P. ovoidea).			
T.—	P. ussuriensis.....	April	Korea and Manchuria	Tall shapely tree. Fls. large. Lvs. large, thick, lustrous.
T.—	Quercus alba.....	.....	N. A.....	Handsomest A. C. of white oak group. Lvs. turn later than most oaks.
T.—	Q. aliena.....	.....	Korea.....	
T.—	Q. arkansana.....	.....	Arkansas.....	Killed 1917–18.
T.—	Q. bicolor.....	.....	N. A.....	Hardy.
T.—	Q. Catesbæi	.....	S. U. S. A.....	A. C. more brilliant than Q. coccinea. Smaller tree. Lvs. more lustrous.
T.—	Q. Cerris	.....	Europe.....	Grows very rapidly while young but short-lived as the stems are usually cracked by the cold. Appeared killed in May, 1918, but recovered.
T.—	Q. coccinea.....	.....	U. S. A.....	
T.—	Q. conferta.....	.....	Hungary.....	Large, common forest tree in some parts of Hungary. Lvs. deeply divided into numerous narrow lobes and turn brick-yellow in autumn. Perfectly hardy, shapely, fast-growing tree.
100′—	Q. crispula.....	.....	Japan.....	This and Q. grosseserrata largest and best of Japan.
T.—	Q. dentata.....	.....	Japan.....	Remarkable for the great size of the lvs. which are often a foot long and 8 in. broad.
T.—	var. pinnatifida.....	.....	.....	Deeply divided lvs.
T.—	Q. georgiana.....	.....	C. Georgia.....	Rare tree. Uninjured for 21 yrs., killed 1917–18. Small specimens survived.
30–40′—	Q. glandulifera.....	.....	Japan.....	Small tree. Bears acorns when 1 ft. high.
100′—	Q. grosseserrata.....	.....	Japan.....	This and Q. crispula largest and best of Japan.

Size	Name	Time of Flowering	Habitat	Remarks
T.	—Quercus heterophylla	.....	C. U. S. A.	First hybrid oak noticed in America. Appeared killed in May, 1917, but recovered.
T.	—Q. imbricaria	.....	.....	Seriously injured 1917–18.
T.	—Q. lyrata	.....	.....	Appeared killed in May, 1918, but recovered.
T.	—Q. macrocarpa	.....	.....	Hardy.
T.	—Q. minor	.....	.....	Hardy
T.	—Q. mongolica	.....	Mongolia and Siberia	
T.	—Q. montana	.....	.....	Hardy.
T.	—Q. Muhlenbergii	.....	.....	Hardy
	Q. pannonica (see Q. conferta).			
T.	—Q. palustris	.....	.....	Handsome A. C., less brilliant than Q. coccinea.
	Q. pedunculata (see Q. Robur).			
T.	—Q. Phellos	.....	.....	Appeared killed in May, 1918, but recovered.
T.	—Q. prinoides	.....	.....	Hardy.
T.	—Q. Robur	.....	Europe	Grows rapidly while young. Short-lived as the stems are usually cracked by the cold.
T.	— var. pendula	.....	.....	Pendulous branches. Slightly injured 1917–18.
T.	—Q. rubra	.....	S. U. S. A.	Appeared killed in May, 1918, but recovered.
T.	—Q. serrata	.....	Korea	Small tree with dark bark. Lvs. are bright green on the two surfaces.
T.	—Q. sessiliflora	.....	Europe	Grows rapidly while young. Short-lived as the stems are usually cracked by the cold.
80′	—Q. variabilis	.....	Japan	Under surface of lvs. silvery. Bark corky.
T.	—Q. velutina	.....	.....	One tree killed 1917–18.
30′	—Rhamnus cathartica	.....	Europe	Valuable shrub for our climate. Lvs. bright and shining, and remain on the branches late. Black shining fruits. One of the best hedge-plants in this climate.
S.	—R. Frangula	.....	.....	Tall shrub. Slender erect stems and branches. Very lustrous lvs. which fall in the autumn without change of color.
12–15′	—Rhododendron arborescens.	July	Appalachian Mts.	Tall shrub. Fls. large, white with red filaments, in clusters. Lvs. dark and shining, pale below. Blooms late.*
D.	—**R. arbutifolium** (R. ferrugineum × R. minus)	.....	.....	Spreads into low, wide mass. Fls. small, unattractive, rose. Foliage handsome. Value in ability to cover either sunny or shady banks. Usually found under R. Wilsonii.
S.	—R. austrinum	.....	Apalachicola River	Fls. slender, pale yellow.
S.	—**R. brachycarpum**	.....	Japan	Fls. pale yellow. Lvs. dark.
4–10′	—R. calendulaceum	June	Appalachian Mts.	Flame-colored Azalea. Fls. clear yellow to flame. Most showy. Few shrubs more beautiful.*
D.	—R. canadense	.....	E. N. A.	Often covers large areas of moist or swampy land. Fls. rose-purple, unattractive.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Rhododendron candidum ..	.....	S. Georgia	Fls. white or pale pink, after lvs.
S.—	R. canescens.....	May	E. U. S. A.....	Fls. pink, very fragrant. Takes kindly to cultivation.
D.—	**R. carolinianum**.....	.....	Appalachians...	Fls. small, bright pink in clusters. Earliest of American rhododendrons. Fls. open and fade before young branches begin to grow. Lvs. very dark. Handsomest. Absolutely hardy dwf. R.*
S.—	**R. catawbiense**.....	June	Appalachian Mts.....	Hardiest of all large-fld. rhododendrons. Wide, low, round-topped, compact shrub. Fls. rose-purple, rather a disagreeable color. Lvs. dark, broad.
S.—	var. **album**.....	.....	.....	Fls. early, white.
S.—	**R. caucasicum**.....	.....	Caucasus.....	Fls. yellowish white in compact clusters. Its hybrids or varieties should be more often found in our gardens. Hardiest rhododendron 1917–18.
	R. caucasicum hybrids.....	.....	.....	Early flowering and as a class are hardier than other hybrids.
	Boule de Neige.....	.....	.....	Rarely 3 ft., wide-spreading. Fls. pure white.
	Cleo.....	.....	.....	Killed 1914–15.
	Coriaceum.....	.....	.....	Fls. pale yellow.
	Glennyi.....	.....	.....	Probably Caucasicum hybrid. Fls. white, in clusters.
	Jacksonii.....	.....	.....	Slightly injured 1917–18. Fls. rose, large.
	Mont Blanc.....	.....	.....	Dwarfer than Boule de Neige. Fls. earlier, rose then white.
	Ochroleucum.....	.....	.....	Killed 1914–15.
	R. coreanum (see R. poukhanense).			
D.—	R. dahuricum.....	April	N. E. Asia.....	Fls. small, dark rose. Lvs. dark, retained late. Very hardy.
D.—	var. sempervirens....	.....	.....	Lvs. more persistent. Fls. darker.
D.—	**R. ferrugineum**.....	.....	Europe.....	Fls. rosy scarlet. Not very satisfactory here, short-lived.
S.—	**R. hirsutum**.....	.....	Europe.....	Fls. rosy pink. Not very satisfactory or long-lived here.
S.—	R. japonicum.....	May	Japan.....	Fls. flame. Handsome. A. C. most beautiful of all azaleas.
S.—	**R. Kaempferi**.....	May	Japan.....	Fls. red, soon wither unless in partial shade.
S.—	**R. maximum**.....	July	U. S. A.....	Grows wild as far N. as N. E. Fls. pale pink or pink and white. Lvs. long, handsome. Absolutely hardy.
S.—	**R. Metternichii**.....	.....	Japan.....	Fls. rose.
6–8′—	**R. micranthum**.....	.....	N. and W. China	Fls. white, in small compact clusters. Suffered 1917–18.
S.—	**R. minus**.....	.....	S. Appalachian	Plant of lower altitudes. Fls. and lvs. smaller than R. carolinianum, more open habit; less valuable. Has been called R. punctatum generally.
	R. molle (see R. sinense).			
S.—	R. mucronulatum	April	N. China.....	Tall, erect shrub. Fls. bright rose before lvs. This and R. dahuricum earliest of rhododendrons. Very hardy.

Size	Name	Time of Flowering	Habitat	Remarks
4′—	**Rhododendron myrtifolium.** (R. hirsutum × R. minus)	....	.....	Compact, round-topped shrub. Fls. good pink shade.
2–8′—	R. nudiflorum.....	May	E. N. A.....	Fls. pale rose or pink, fragrant, before or with lvs.
S.—	R. occidentale.....	.....	Sierra Nevada..	Fls. white.
S.—	**R. ponticum**.....	.....	S. Europe and Asia Minor..	Hardy only in sheltered positions.
S.—	R. poukhanense.....	May	Korea	Round-topped, compact shrub. Fls. large, rosy pink, fragrant.
S.—	var. yodogawa.....	May	.....	Fls. double.
S.—	R. praecox..... (R. dahuricum × R. ciliatum).	.....	.....	"Little Gem." Fls. pale rose, blooms so early they are often injured. Very hardy.
	R. punctatum (see **R. minus**).			
S.—	R. rhombicum.....	May	Japan.....	Fls. rose-purple.
S.—	R. sinense.....	.....	China.....	Fls. yellow, beautiful.
S.—	R. Schlippenbachii.....	May	Korea.....	One of handsomest Asiatic azaleas. Fls. white, tinged rose, 3 to 3½ in. wide, before lvs.
S.—	**R. Smirnovii**.....	.....	Caucasus.....	Fls. light pink, large clusters. Lvs. pale gray-green clothed below with a thick, felt-like rusty brown covering; suffer from summer sun. Grows best in partial shade. Plant from which much can be expected. Absolutely hardy.
15–18′—	R. Vaseyi.....	May	N. C. and S. C.	First American species to bloom. Slender stems, irregular habit. Fls. pure pink in small compact clusters, before lvs.
4–8′—	R. viscosum.....	July	E. N. A.....	Fls. white, blooms late.
S.—	**R. Wellesleyanum**..... (R. maximum × R. catawbiense).	.....	.....	Less hardy than either parent.
S.—	**R. Wilsonii** (see **R. arbutifolium**).			

Rhododendron hybrids.

album elegans. White tinged blush; late.
album grandiflorum. White tinged blush; late.
atrosanguineum. Red; very early.
bicolor. Purple tinged white on upper petal; early.
Charles Bagley. Dark crimson.
Charles Dickens. Red; early.
delicatissimum. White tinged pink; very late.
Edward S. Rand. Crimson.
Everestianum. Light purple; early.
F. L. Ames. Red-violet, white center; late.
H. W. Sargent. Red; late.
Hannibal. Rosy red-violet; early.
Kettledrum. Crimson; early.
King of the Purples. Dark purple.
Henrietta Sargent. Pink; early.
Lady Armstrong. Rose; early
Mrs. Millner. Crimson.
Mrs. Charles Sargent. Pink.
Mrs. Harry Ingersoll. Red-violet, spotted brown on upper petal; late.
purpureum elegans. Dark purple.
purpureum grandiflorum. Dark purple; late.
roseum elegans. Rose; early.
Sefton. Dark red-violet; early.

Rhododendrons most successful in the neighborhood of Boston previous to 1914.

Rhododendron hybrids, uninjured 1914–15.

atrosanguineum Charles Dickens H. W. Sargent

Size	Name	Time of Flowering	Habitat	Remarks
	Rhododendron hybrids, some individuals killed 1914–15.			
	Adolf		Diana	Lady Grey Egerton
	atrorubrum		F. L. Ames	Marquis of Waterford
	Bismarck		F. B. Hayes	Mrs. Harry Ingersoll
	Butlerianum		Hanna Felix	Prometheus
	delicatissimum		King of the Purples	R. S. Field.
	Rhododendron hybrids, all individuals killed 1914–15.			
	Alarich		Duke of Connaught	Mme. Wagner
	Albin		Earl of Shannon	Mum
	Alfred		Egge	Mrs. H. S. Hunnewell
	Bluebell		Elysium	Menemoisyne
	Circe		Fee	Salmonum roseum
	Daniel		Hercules	Sir H. Havelock
			Jay Gould	
	Rhododendron hybrids killed 1917–18.			
	Gomer Waterer		Marquis of Waterford	Mrs. Thomas Agnew
	James Smith		Marshall Brooks	
	Rhodora (see Rhododendron canadense).			
S.	—Rhus canadensis.....	.....	N. A.	Fragrant Sumach (R. aromatica). Rather a straggling plant with slender stems sometimes three or four ft. high. Fls. are bright yellow, on short axillary branches. Followed by red frts.
S.	—R. copallina.....	.....	.....	Lvs. are rather more lustrous than those of the other Sumachs. Wings on the leaf stalks. Few plants present a more brilliant appearance when the lvs. turn bright scarlet.
T.	—R. javanica.....	July	China.....	Small tree. Fls. white. A. C. very fine.
T.	—R. verniciflua.....	.....	China.....	The "Lacquer Tree" of Japan and China is as poisonous as R. toxicodendron. A. C. brilliant.
S.	—Ribes aureum.....	.....	Headwaters of the Missouri River, to the N. W. of Arizona.....	Smaller plant than R. odoratum with more slender stems. Flowers smaller. Frt. black and orange. Perhaps a more attractive plant.
S.	— var. chrysococcum....	.....	Montana.....	Frt. yellow.
	R. alpestre			
S.	— var. commune.....	May	Thibet.....	Fls. small, inconspicuous. Frt. acid, prickly and of little beauty. May prove valuable as hedge plant in cold regions.
S.	—R. cereum.....	.....	Rocky Mts.....	Fls. small, white, covering plant. Frt. red, sweet and edible. Handsome foliage.
S.	—R. curvatum.....	.....	C. Georgia.....	Little-known plant. Fls. long, white, gracefully drooping on long stems. One of the most attractive of the collection.
S.	—R. Cynosbati.....	.....	E. N. A.....	
S.	— var. inerme.....	.....	N. W. U. S.....	Fls. white.
S.	—R. fasciculatum.....	.....	China.....	Frt. bright red. Only species with frt. which ripens in the autumn.
S.	— var. chinense.....	.....	China.....	Frt. scarlet. A. C. bright shades, orange and scarlet.
S.	—R. missouriense.....	.....	Missouri to Arkansas....	Fls. pale yellow.
S.	—R. niveum.....	.....	N. W. N. A....	Fls. pure white.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Ribes odoratum		Dakota to Texas	Large, broad, very hardy, fast-growing shrub. Fls. bright yellow, fragrant, in drooping clusters. Frt. black, lustrous. In many books this plant appears as R. aureum, but this name properly belongs to a smaller plant from the Northwest. American Currant.
S.—	R. pinetorum		New Mexico	Fls. bright orange-red. Most beautiful of all the gooseberries.
S.—	R. robustum (R. niveum × R. oxyacanthoides).			Vigorous. Fls. white.
S.—	R. stenocarpum		W. China	Fls. white.
4–5′—	R. tenue	May	W. China	Fls. dull yellow. Frt. bright red, luscious, juicy, sweeter than common currants.
S.—	Robinia hispida			Shrubby Rose Acacia. Less often attacked by borers. Fls. bright rose. Spreads rapidly, may become troublesome.
T.—	R. Holdtii (R. pseudacacia × R. neo-mexicana).			One of the most interesting Locusts. Vigorous tree. Fls. Better able to resist the borer than either of its parents.
S.—	R. Kelseyi		S. Appalachian.	Desirable and handsome plant.
S.—	R. neo-mexicana			Suffers badly from the attacks of the borer.
T.—	R. pseudacacia			Almost impossible to keep the locust tree alive in eastern Massachusetts owing to the borer. Thirty varieties are now known.
T.—	var. Decaisneana	June		Fls. pale pink.
T.—	var. monophylla.			
T.—	var. umbraculifera			Parasol Acacia.
S.—	R. viscosa			Suffers badly from the attacks of the borer.
S.—	Rosa Arnoldiana (R. rugosa × Gen. Jacqueminot).			Dawson hybrid. Stout bush. Fls. single, bright red, showy. Foliage good.
	R. banksiopsis		China	Hardy.
S.—	R. bella	June	N. China	Large shrub. Fls. bright red. Frt. red, showy. Hardy.
S.—	R. blanda			Earliest of the five N. E. species.
S.—	R. carolina.			
S.—	R. caudata	June	China	Large shrub; stout arching stems. Fls. pale pink, 2 in. wide, in clusters of 20–25. Frt. orange-red, 1 in. long.
S.—	R. cinnamomea.			
	R. corymbulosa		China	Killed to ground 1917–18.
	R. Davidii		China	Killed to ground 1917–18.
	R. davurica		China	Hardy.
S.—	R. Ecæ	May	C. Asia	Small, exceedingly spiny shrub. Fls. pale canary-yellow. Lvs. small. This and R. Hugonis are first to flower. Hardy.
	R. filipes		China	Killed to ground 1917–18.
S.—	R. fœtida		Caucasus and Persia	A beautiful and little known rose.

Size	Name	Time of Flowering	Habitat	Remarks
	Rosa fœtida			
S.—	var. bicolor	.....	.....	Austrian Briar. Fls. yellow outside, dark copper inside. Harison's Yellow is believed to be a hybrid of this × R. spinosissima.
S.—	var. persiana.....	June	.....	Persian Yellow is last of yellow-fld. roses to bloom. Dwarfer and better habit than Harison's Yellow. Fls. larger, better color, double.
	R. gallica			
S.—	var. officinalis.....	June	.....	Fls. partly double, red, fragrant.
	R. Gentiliana.....	.....	China.....	Killed to ground 1917–18.
5–8′—	R. Helenæ.....	June	W. China.....	Large shrub, slender, arching stems. Fls. single, pure white, in many-fld clusters, delicate fragrance. Hardy.
S.—	R. Hugonis.....	May	W. China.....	Fls. single, clear yellow. Lvs. pale, small. No Chinese rose more beautiful.*
S.—	R. humilis.....	.....	U. S. A.....	Common Wild Rose of the interior. Low plant. Lvs. dull. Least ornamental of native roses.
S.—	R. Jackii.....	July	Korea.....	Long stems lie flat on ground. Fls. white, in clusters, fragrant. Lvs. lustrous.*
S.—	R. Lheritierana..... (R. chinensis × R. pendulina?)	.....	.....	Fls. partly double, pale rose. Not uncommon in old N. E. [gardens.
	R. lucida (see R. virginiana).			
S.—	R. Marretii.....	.....	Hokkaido and Sanghalien...	Fls. single, pink. Lvs. pale. Tall, arching stems.
	R. microphylla (see R. Roxburghii).			
	R. Moyesii.....	.....	China.....	Killed to ground 1917–18
	var. rosea.....	.....	.....	Also suffered.
S.—	R. multibracteata.....	.....	China.....	Fls. pale pink. Bright red prickles make young shoots showy. Killed to ground 1917–18.
	R. multiflora.			
S.—	var. cathayensis.....	June	China.....	Hardy and vigorous. Fls. clear pink. Probably type from which Chinese derived crimson Rambler.
D.—	R. nitida.....	.....	Mass. to Newfoundland...	Most beautiful. Fls. rather dark. Short stems covered with bright red prickles.
S.—	R. omeiensis.....	.....	China.....	Vigorous. Fls. pure white, 1 in. diam. Frt. red on yellow stalks. Bright red prickles on young stems. Hardy.
	R. Prattii.....	.....	China.....	Killed to ground 1917–18.
	R. Roxburghii.			
S.—	var. normalis.....	June	China.....	Fls. pale shell-pink, size of R. rugosa. Frt. red.
S.—	R. rugosa	.....	N. E. Asia.....	Native of sand-dunes. Grows well in garden. Fls. red.
S.—	var. alba.....	.....	.....	Fls. white.
S.—	var. kamtschatica....	.....	Kamtchatka...	Fls. smaller. Lvs. smaller.
S.—	var. rosea.....	.....	.....	Fls. pink..
	R. rugosa Hybrids.			
	Conrad F. Meyer....	.....	.....	Fls. pink, nearly double, clustered.

Size	Name	Time of Flowering	Habitat	Remarks
	Rosa rugosa Hybrids, continued			
	Lady Duncan (R. rugosa × R. Wichuraiana).	.....	.....	Prostrate stems, can be used as ground-cover or vine. Fls. pink, smaller than R. rugosa.
	Mme. Georges Bruant	.....	.....	Fls. white, semi-double.
	Nova Zembla	.....	.....	Fls. white, a sport of C. F. Meyer.
	repens alba	.....	.....	Prostrate stems. Hardier than R. Wichuraiana. Can be used as ground-cover or as vine.
S.—	R., "Sargent" (H. P. Baroness Rothschild × R. Wichuraiana × Crimson Rambler).	.....	.....	Dawson hybrid. Fls. cup-shaped, pale clear pink, semi-double.*
	R. saturata	.....	China	Hardy.
3'—	R. sertata	June	China	Spreading, arching stems. Fls. solitary, pink, slightly fragrant. Hardy.
S.—	R. setigera	July	Mich. to Texas	Tall arching stems. Fls. pink, clusters. Last to bloom. Foliage handsome. No finer rose.*
S.—	R. setipoda	.....	Mts. of Hupeh.	Large vigorous shrub. Fls. dark pink, in broad, many-fld. clusters. Hardy. Promising.
S.—	R. simplicifolia	.....	Persia	Fls. yellow. Not hardy.
	R. spinosissima	.....	.....	Scotch Briar.
S.—	var. altaica	.....	Siberia	Very hardy, tall, wide bush. Fls. numerous, large, single, white tinged yellow. Frt. black, shiny.*
S.—	var. fulgens	.....	.....	Fls. pale pink.
S.—	var. Harison's Yellow	.....	.....	Cross between Austrian and Scotch Briar. Hardy, free-flg., vigorous. Fls. pale yellow, semi-double.
S.—	var. hispida	.....	.....	Fls. yellow.
S.—	var. lutea	.....	.....	Fls. pale yellow.
S.—	R. stellata	July	New Mexico	Slender, pale yellow stems. Fls. deep rose, 2½–3 in. diam. Frt. dark red, prickly.
	R. Sweginzowii	.....	China	Hardy.
S.—	R. virginiana	.....	N. E. N. A.	Common rose of seacoast. Fls. dark red to pink. Lvs. thick, lustrous.
S.—	var. alba	.....	.....	Fls. white.
S.—	R. Wichuraiana	July	.....	Prostrate stems. Fls. white.
	R. Willmottiæ	.....	China	Killed 1917–18. Grows well at Rochester, N. Y.
	R. xanthina	.....	Chinese Turkestan	Hardy.
S.—	Rubus coreanus	.....	China	White stems.
S.—	R. laciniatus	July	Europe	Long red stems. Good for covering banks or fences.
S.—	R. lasiostylus	.....	China	White stems.
S.—	R. thyrsoideus, var. flore-pleno	.....	.....	Well suited for covering fences, etc., producing stems 10–20 ft. long in a season. Fls. double, pink or white, in many-fld. clusters, resembling miniature roses. Little known.
S.—	R. ulmifolius, var. bellidiflorus	.....	.....	
T.—	Salix alba	.....	Europe	Lvs. shorter and narrower than S. fragilis, and covered with whitish silky hairs.
T.—	var. argentea	.....	.....	Lvs. thickly covered with silvery white tomentum.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Salix alba, var. cærulea	.....	.....	Commonest. Some consider it a species, S. cærulea.
T.—	S. amygdaloides	.....	N. E. N. A.	
T.—	S. babylonica	.....	China	Well-known Weeping Willow of China. Sometimes suffers from cold in Mass.
	S. blanda (S. viminalis × S. babylonica).	.....	.....	General name for group of Willows, natural hybrids. Handsomest has bright yellow branches. It is without a proper name though it is sold as S. babylonica aurea, or ramulis aureis, as S. vitellina pendula, and as S. alba vitellina pendula.
T.—	S. elegantissima	.....	.....	Probably hybrid of and often sold as S. babylonica. Hardy.
T.—	S. fragilis	.....	Europe	Not rare in N. E. but more common farther south.
3–4′—	S. gracilistyla	.....	Japan	
6–9′—	S. humilis	.....	N. U. S. A.	Native shrub with gray-green lvs. and yellow anthers. Slender red stems make a handsome contrast with the silvery gray flower-clusters.
T.—	S. nigra	.....	N. E. N. A.	
T.—	S. rubens (S. alba × S. fragilis).			
T.—	S. Salamonii (S. babylonica × S. alba).	.....	.....	Only female tree is known. Large, vigorous, hardy tree. Ascending branches and drooping branchlets.
T.—	S. sepulcralis (S. babylonica × S. fragilis).			
2′—	S. tristis	.....	N. U. S. A.	A spreading shrub with slender stems and small gray-green lvs. The anthers of the male plant are bright red when they first appear and much more showy than the gray inflorescence of the female plant. Grows naturally on dry, barren soil. Spreads into large masses. Excellent plant for covering dry, barren slopes.
	S. repens			
S.—	var. argentea	.....	N. Europe and Siberia.	
D.—	Salvia officinalis	July	S. Europe	Aromatic shrub. Fls. purple, showy.
S.—	Sambucus canadensis	July	N. A.	Fls. white. Frt. black.
S.—	var. acutiloba	.....	.....	Finely divided leaflets. A curiosity.
S.—	var. chlorocarpa	.....	N. H.	Frt. yellow-green.
S.—	var. maxima	.....	Europe	Fl.-clusters at least three times as large as those found on the wild plants, followed by such large and heavy bunches of frt. that the branches are hardly able to support them.
S.—	S. nigra	.....	Europe	
	var. aurea	.....	.....	Var. with yellow lvs.
S.—	S. racemosa	.....	Europe	
S.—	var. Sieboldiana	.....	Japan	Best as a foliage plant.
S.—	S. pubens	.....	N. A.	Frt. red.
S.—	var. leucocarpa	.....	.....	Rare var. Frt. orange-colored.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Sassafras officinale	.....	N. A.	Free from pests. Handsome tree. Frt. blue with scarlet calyx, very showy, fast eaten by birds. A.C. unsurpassed. Suckers easily transplanted.
T.—	S. Tzumu	.....	China	Only other species known. Not yet established in Arboretum.
V.—	Schizophragma hydrangeoides	July	Japan	Fls. less showy than Hydrangea petiolaris but more interesting. Lvs. smaller, darker. Has been most difficult to establish in Arboretum. Very rare.
T.—	Sciadopitys verticillata	.....	Japan	Curious Umbrella Pine. Perfectly at home at the Arboretum.
S.—	Shepherdia argentea	.....	W. N. A.	Shrub or small tree. Fls. minute, clustered, axillary. Frt. small, handsome crimson or yellow, subacid. Ripens early in autumn.
T.—	Sophora japonica	August	China	Very hardy, good habit. Fls. creamy white in erect clusters. Lvs. dark. Branchlets green.
T.—	var. pendula	.....	.....	Fls. rarely.
T.—	var. pyramidalis	.....	.....	Erect branches.
2–4′—	S. viciifolia	June	Cent. and W. China	Fls. pea-shaped, blue and white, showy. Lvs. small, pinnate.
S.—	Sorbaria sorbifolia	.....	E. Siberia and Japan	Handsome shrubs. Fls. small, white, in large erect clusters; remain in good condition a long time. Lvs. dark, divided.
S.—	S. stellipila	.....	Japan	
30′—	Sorbus americana	.....	N. A.	Lvs. bright shades of yellow and scarlet in autumn. Frts. remain on the branches in good condition until the flocks of northern robins arrive, when they will eat every berry in preparation for their long flight southward.
50′—	var. decora	.....	.....	Handsomest.
T.—	S. commixta	.....	Japan	Narrow tree with tall clear stem. Fl.-clusters of moderate size. Frt. bright red. A. C. orange and red, chief value.
T.—	S. Aucuparia	.....		
S.—	Spiræa arguta (S. multiflora × S. Thunbergii).	.....	Europe	Usually short-lived. More desirable than S. Thunbergii.
S.—	S. Henryi	.....	China	Tall, hardy, vigorous shrub. Fls. white in large flat clusters on upper side of wide-spreading, arching branches.
S.—	S. Miyabei	.....	China	Fls. flat clusters, white, profuse. Blooms before S. Henryi and S. Veitchii.
S.—	S. nipponica	.....	Japan	Large shrub with long arching branches and one of the handsomest of the still little-known Spireas.
S.—	S. nudiflora	.....	.....	Hybrid. Buds are pale pink.
S.—	S. trilobata	.....	Siberia	Dwarfer and better than S. Van Houttei. Perfectly hardy and free-flowering.
S.—	S. Van Houttei. (S. cantoniensis × S. trilobata)	.....	.....	Suffers in cold winters. Less valuable than S. trilobata.
12′—	S. Veitchii	.....	China	
S.—	S. Wilsonii	.....	China	Hardy.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Staphylea Bolanderi	.....	Calif.	
S.—	S. colchica	.....	Caucasus	
S.—	var. Hessei.			
S.—	var. Coulombieri	.....	.....	Probably hybrid.
S.—	S. emodi	.....	Himalayas	
20–25′—	S. holocarpa	May	W. China	Fls. white to rosy lilac, in pendulous racemes, fragrant, before lvs.*
S.—	S. pinnata	.....	Europe	Little value.
S.—	S. trifolia	.....	N. A.	Little value.
S.—	Stuartia pentagyna	.....	S. Appalachian.	Fls. white, cup-shaped, not unlike those of a single Camellia. One of the most desirable of the summer-flowering shrubs which can be grown in this climate. Large, free-flowering shrub. A form with bright purple stamens which make the fls. more conspicuous than those of the common form with yellow stamens.
T.—	S. pseudo-Camellia	.....	Japan	Taller plant. Tree-like in habit. Small, slender tree common on the mountain slopes of central Japan. Fls. white, cup-shaped, resemble those of a single-flowered camellia. They are smaller than those of the two American Stuartias. A. C. dark wine color.
S.—	S. virginica	.....	S. States	
S.—	Styrax japonica	June	Japan	Fls. pure white, bell-shaped, hanging gracefully down from the branches on long slender stems. One of the handsome flowering shrubs of Japan. Perfectly hardy in the neighborhood of Boston.
T.—	S. obassia	.....	Japan	Small tree. Hardy but does not fl. freely in Arboretum.
S.—	Symphoricarpos racemosus			
S.—	var. lævigatus	.....	.....	Handsomest form.
S.—	Symplocos paniculata (cratægoides).	.....	Japan	One of the most beautiful flowering shrubs which Japan has contributed to our gardens. Fls. small, white, in abundant clusters. Frts. small, bright blue, a color not often seen in northern gardens. Large and perfectly hardy shrub.
S.—	Syringa affinis	May	China	Fls. pure white, borne in loose, rather narrow, open clusters, extremely fragrant. Very hardy; grows rapidly. Habit is loose and not attractive.
S.—	var. Giraldii	May	China	Fls. purple or mauve-colored.
20′—	S. amurensis	June	Siberia	Fls. white in flat, spreading or slightly drooping clusters. First of tree lilacs to bloom.
S.—	S. chinensis (S. vulgaris × S. persica)	May	.....	Fls. purple-red, in long clusters. Varieties with rose-colored and with pale, nearly white, fls. Sometimes known as S. rothomagensis. Shrub as large or larger than the common lilac. Slender branches. Lvs. intermediate in shape between those of its two parents. One of the most valuable of all lilacs.

Size	Name	Time of Flowering	Habitat	Remarks
	S.—Syringa emodi	.....	Himalayas.....	Large, broad shrub. Fls. small, white in long narrow clusters, fragrant. Last to bloom. Lvs. large, light yellow-green above and silvery gray and covered with soft white hairs below.
	S.—S. Henryi (S. Josikæa × S. villosa).	.....	.....	General name for group of hybrids, later flg. than parents. Fls. violet or reddish purple in clusters about 1 ft. long.
	S.— var. Lutèce	.....	.....	Handsomest.*
	S.—S. hyacinthiflora (S. vulgaris × S. oblata).	May	.....	Large size. Fls. small blue-purple, very fragrant. Chiefly valuable on account of its earliness.
30–40′	S.—S. japonica	June	Japan.....	Lustrous bark like that of a cherry tree. Wide round-topped head. Fls. white, erect clusters. Last to bloom and most tree-like of the lilacs. One of the most beautiful of the flowering trees which can be grown in this climate.*
	S.—S. Josikæa	.....	Hungary.....	Tall shrub. Loose, unattractive habit. Fls. small, purple in long, slender open clusters. Lvs. small. Least attractive of all lilacs.
	S.—S. Julianæ	June	N. China.....	Same general character as S. pubescens. Fl. buds rose. Fls. fragrant but not so fragrant as S. pubescens.
	S.—S. Koehneana	.....	Korea.....	Large, vigorous. Fls. pale rose in short, broad compact clusters, fragrant.
	S.—S. Komarovii	.....	China.....	Large shrub related to S. villosa. Handsome foliage and fls.
	S.—S. Meyeri	May	China.....	Fls. dark purple.
	S.—S. microphylla	.....	China.....	Fls. small, fragrant, pale pink. Often second bloom in Oct.
	S.—S. oblata	.....	China.....	Fls. large, pale lilac, very fragrant. Lvs. thick and leathery. A. C. deep bronze-red color. Tall, broad shrub.
30′	S.—S. pekinensis	June	N. China.....	Shrub rather than a tree. Numerous stout stems pendent at the ends and covered with bark peeling off in thin layers like that of some of the birch trees. Fls. white, in half-drooping, flat, and unsymmetrical clusters, in great quantities.
	S.—S. persica	.....	Caucasus.....	Blooms rather later than the common lilacs. None more beautiful than this Persian lilac. Wide and shapely bush. Fls. in long clusters which weigh down the slender branches; fra-
	S.— var. alba	.....	.....	Fls. white. [grant.*
	S.— var. laciniata	.....	.....	Lvs. deeply lobed.
	S.—S. pinnatifolia	.....	China.....	Fls. and fl.-clusters are small and not conspicuous, but the deeply divided lvs. are unusual.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Syringa pubescens	.....	China.....	One of the best. Tall shrub with erect stems. Fls. large clusters, pale lilac, fragrant, free-flg. Hardy.
S.—	S. reflexa.....	June	China.....	Fls. deep rose, in compact, cylindrical clusters, disagreeable odor. Stout, vigorous shrub.
	S. rothomagensis (see S. chinensis).			[Best new lilac.
S.—	S. Sargentiana.....	June	China.....	Fls. paler than S. reflexa, in large loose clusters.
S.—	S. Sweginzowii.....	.....	Korea.....	Appears to be perfectly hardy. Fls. nearly white, flesh-colored in bud, slightly fragrant. One of the latest, if not the latest, of the true lilacs to fl. here.
S.—	S. tomentella.....	.....	China.....	Large shrub related to S. villosa. Fls. palest rose. Handsome foliage.
S.—	S. villosa.....	.....	N. China.....	Blooms later than the other lilacs. Large, vigorous and very hardy shrub with good foliage. Fls. pale pink or rose-colored, disagreeable odor.
S.—	S. vulgaris.....	.....	Bulgaria.....	A plant for the North, for in S. New England and southward the lvs. in summer are often temporarily disfigured by white
	S. Wilsonii (see S. tomentella).			[mildew.
S.—	S. Wolfii	.....	Mongolia.....	Fls. small, dark blue, purple, or rose, in clusters 2 ft. long, 1 ft. diam., no fragrance.
S.—	S. yunnanensis.....	June	S. W. China....	Tall open habit. Fls. small, creamy white, tinged rose, unusual and delicate fragrance.

Syringa hybrids, best varieties.
Charles X. Rosy lilac.
*Philemon, *Ludwig Spaeth, Congo } Dark red-purple.
Macrostachya, Gloire des Moulins } Pink.
*Marie Legraye. Single; white.
Mme. Lemoine, Miss Ellen Willmott } Double; white.
Justi. Blue.

Syringa hybrids, best of the newer varieties.
Deuil d'Emile Gallé. Double; pale pink.
Waldeck Rousseau. Single; pink.
L'Oncle Tom. Single; dark red-purple.
Grand Duc Constantin. Light lilac.
Toussaint l'Ouverture. Red-purple, in unusually long, narrow clusters.
De Mirabel. Single; dark lilac; long narrow clusters.
Edmond Bossier. Single; dark rose-purple; large broad clusters.
Maurice de Vilmorin. Double; pale lilac.
President Loubet. Single; deep lilac.
Languis. Single; pale pink, dark rose buds.
Réamur. Single; large; rose; broad clusters.

Syringa hybrids, other good varieties.
Marliensis pallida. Pale pink.
Furst Lichtenstein. Single; pink.
Condorcet. Double; pale blue, rose-colored buds.

T.—	**Taxus baccata**.....	.....	Europe.....	Suffers more or less severely here from cold.

Size	Name	Time of Flowering	Habitat	Remarks
2′—	Taxus baccata, var. repandens	.....	.....	Form which is perfectly hardy. A broad, flat-topped, rather compact shrub, with exceedingly dark green foliage. A plant of great value for this part of the country.
T.—	T. cuspidata	.....	Japan.....	Entirely hardy here. A forest tree in Japan. Some plants in Arboretum show signs of tree development. [desired.
T.—	var. capitata	.....	.....	Probably best if tree form is
4′–5′—	var. nana	.....	.....	Very dark green lvs. Wide-spreading, rather irregularly growing branches. Attains a height of only 4–5 ft., but sometimes covers a space 10–15 ft. in diameter. Most valuable of all dwf. evergreens. Incorrectly called var. brevifolia.
	Teucrium Chamædrys	.....	.....	Killed 1917–18.
T.—	Thuya occidentalis	.....	N. A.....	Some forms are very dwf. Others grow into large globular masses. Others are narrow pyramids. Some have pendulous branches. They vary, too, in the color of [the foliage.
T.—	T. plicata	.....	W. N. A.....	
T.—	T. Standishii	.....	Japan.....	Perfectly at home at the Arboretum.
D.—	Thymus Serpyllum	July	.....	Forms mat. Fls. small, lilac, in quantities. Useful for rock-garden.
D.—	T. vulgaris	.....	S. Europe.....	Dwf. shrub spreading rapidly into broad mats, completely covered with short clusters of purplish blue two-lipped fls.
T.—	Tilia alba	.....	.....	Often called Tilia Michauxii. Distinguished from T. americana by the pale lower surface of the lvs. which is more or less covered with star-shaped clusters of white hairs.
T.—	T. americana	.....	N. E. N. A.....	Growing to its largest size on rich hillsides and moist bottomlands. Greatest beauty in the forests of New Brunswick, northern New England, and the valley of the St. Lawrence River Distinguished by the green and shining lower surface of the lvs. Here the lvs. are sometimes made brown by the red spider. Often sold in the nurseries as Tilia alba spectabilis.
T.—	T. argentea	.....	Europe.....	Large tree, compact head. Lvs. dark above, silvery white beneath.
T.—	T. cordata	.....	N. Europe.....	Distinguished by its small, thin, more or less heart-shaped lvs. which are pale on the lower surface and furnished with conspicuous tufts of rusty brown hairs in the axils of the principal veins. Hardy and desirable tree.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Tilia cordata, var. cordifolia	.....	.....	Sold as T. europæa or vulgaris. Large lvs.
T.—	T. euchlora or T. dasystyla.	.....	.....	Hybrid. Pyramidal tree. Large, dark green lvs. lustrous on their upper surface. Grows rapidly. Its habit is good.
T.—	T. europæa (see T. vulgaris).			
T.—	T. flavescens (T. americana × T. cordata).	.....	.....	Usually under the name of T. floribunda. Remarkable in its rather small, thick and very lustrous lvs. and large fls.
T.—	T. floribunda (see T. flavescens).			
T.—	T. hybrida (see T. vulgaris).			
T.—	T. heterophylla	.....	Appalachians	Lvs. are larger than those of the other lindens. Silvery white on the lower surface. The slightest breeze makes them turn first one surface and then the other to the eye.
T.—	T. intermedia (see T. vulgaris).			
T.—	T. japonica	.....	E. Asia	Small tree with pendulous branches. Related to T. cordata. First to unfold lvs.
T.—	T. Michauxii (see T. alba).			
T.—	T. mongolica	.....	E. Asia.	
T.—	T. petiolaris	.....	E. Europe	Beautiful tree. Lvs. which are silvery white on the lower surface hang down on long, slender stalks and flutter gracefully in the breeze. Branches are also pendulous. Rather narrow but open head. A supposed hybrid of this tree with T. americana and sometimes sold in nurseries as T. alba spectabilis is a very handsome tree.
T.—	T. platyphyllos	June	Europe	Recognized by the yellow tinge of the lvs. and the thick stalks, and by the prominent ribs of the frt. First to bloom.
T.—	var. grandifolia.			
T.—	var. pyramidata.			
T.—	var. vitifolia.			
T.—	T. spectabilis	.....	.....	Believed to be a hybrid. Very vigorous and fast-growing tree of much promise. Lvs. large, silvery beneath.
T.—	var. Moltkei	.....	.....	Lvs. thicker than type.
T.—	T. vulgaris (T. platyphyllos × T. cordata).	.....	.....	Fine, round-headed tree with rather small somewhat pendulous branches.
T.—	var. pallida	.....	Hungary.	
T.—	**Torreya nucifera**	.....	Japan	One of the handsomest evergreen trees in Japan. Hardy in this climate. Large tree with a tall trunk and dense head of dark green foliage.
S.—	Tripterygium Regelii	July	Korea and Japan.	Half-climbing shrub. Fls. small, white, in clusters 10 in. long. Frt. three-winged.
T.—	**Tsuga canadensis**	.....	N. A.	Dwf. and other abnormal forms often occur in the woods. Sargent's Hemlock, one of these.
T.—	**T. chinensis**	.....	.....	Injured 1917–18. Will probably never be successful here.
T.—	**T. caroliniana**	.....	Blue Ridge	Smaller tree than our northern hemlock, but is even more graceful in the droop of its slender branches. Can be depended on to flourish in S. N. E.*
T.—	**T. densiflora**	.....	Japan	Killed 1917–18.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	**Tsuga diversifolia**	.....	Japan	Mountain Hemlock. Perfectly at home at the Arboretum.
T.—	**T. heterophylla**	.....	Alaska to Cal.	Largest and handsomest of all hemlocks. Probably short-lived here.
T.—	**T. Mertensiana (Pattoniana)**	.....	Pacific Coast	
T.—	**T. Sieboldii**	.....	Japan	Doubt if will ever live long in N.E.
T.—	**T. yunnanensis**	.....	China	Largest and most widely distributed of the conifers of China.
T.—	Ulmus americana. U. campestris (see U. procera). U. effusa (see U. lævis).			
T.—	U. foliacea	.....	Europe, Africa, Asia	Paler bark than U. procera. Smooth and shining lvs. Fertile seeds in abundance.
T.—	var. Dampieri	.....	.....	Fastigiate.
T.—	var. pendula	.....	.....	Very pendulous branches.
T.—	var. stricta	.....	.....	Cornish Elm. Narrow pyramidal head.
T.—	var. suberosa	.....	.....	Corky wings on branches.
T.—	var. umbraculifera	.....	Persia and Armenia.	Dense globose head.
T.—	var. variegata	.....	.....	Lvs. blotched white.
T.—	var. Wheatleyi	.....	.....	Wheatley Elm. Pyramidal tree.
T.—	U. glabra	.....	Europe and Asia	Scotch or Wych Elm. Smooth trunk and branches. Fertile seeds and does not sucker. Many abnormal seedlings. Least beautiful.
T.—	var. atropurpurea	.....	.....	Little to recommend it.
T.—	var. Camperdownii	.....	.....	Regularly pendulous branches.
T.—	var. crispa	.....	.....	More curious than beautiful.
T.—	var. fastigiata	.....	.....	Exeter Elm. Narrow pyramidal tree.
	var. heterophylla	.....	N. and W. China	
T.—	var. pendula	.....	.....	Horizontally spreading branches. Handsomer than var. Camperdownii.
	U. hollandica (U. foliacea × U. glabra).	.....	.....	General name of a race of hybrids, among them some of the handsomest and most valuable of European elms.
T.—	var. belgica	.....	.....	Tall tree, straight trunk, rough bark. Handsome and desirable as street tree in Holland; too soon to judge its value here.
T.—	var. Dumontii	.....	.....	Fastigiate.
T.—	var. Klemmer	.....	.....	Fastigiate.
T.—	var. superba	.....	.....	Narrow, pyramidal tree.
T.—	var. major	.....	.....	Dutch Elm. Large tree; short trunk, rough bark, wide-spreading branches with corky wings. Suckers.
100′—	var. vegeta	.....	.....	Huntingdon Elm. Massive trunk, spreading and ascending branches. One blown down, 1911, Magdalen College, Oxford, 142′ high, trunk 27′ around 5′ from ground. Grows more rapidly than other elms. Suckers freely.

Size	Name	Time of Flowering	Habitat	Remarks
T.—	Ulmus lævis	.....	Scandinavia and N. Russia.	Broad, pyramidal head. Earliest to unfold lvs.
	U. major (see U. hollandica, var. major).			
	U. minor	.....	England	Small-lvd., large tree.
	U. montana (see U. glabra).			
	U. nitens (see U. foliacea).			
	U. pedunculata (see U. lævis).			
100′—	U. procera	.....	.....	Long known as U. campestris. The English elm rarely produces seeds. Is propagated by suckers. Splendid, tall, long-lived tree with a massive trunk and erect or spreading branches. Has grown to a larger size in Boston and its suburbs than any other planted tree.
T.—	var. viminalis	.....	.....	Small lvs. Supposed to be a seedling.
	U. sativa (see U. minor).			
	U. scabra (see U. glabra).			
	U. surculosa (see U. procera).			
D.—	Vaccinium canadense	.....	N. E. N. A.	Beautiful for ground-cover in native woods.
S.—	V. corymbosum	.....	E. N. A.	Fls. white, bell-shaped. One of the most beautiful shrubs of eastern N. America. Habit is good. Fls. and frt. are beautiful. No other plant has a more splendid autumn color.*
D.—	**V. macrocarpon**	.....	.....	Will grow in dry ground, though native to swamps. Beautiful plants.
D.—	**V. Oxycoccus**	.....	.....	
D.—	V. pennsylvanicum	.....	N. E. N. A.	Beautiful for ground-cover in native woods.
D.—	V. vacillans	.....	N. E. N. A.	
D.—	**V. Vitis-Idæa**	.....	.....	Tufted creeping stems. Fls. small, pink or white. Frt. dark red.
	var. **minor**	.....	.....	
S.—	Viburnum acerifolium	.....	E. N. A.	Valuable as an undershrub for it grows well in comparatively dense shade.
	V. affine (see V. pubescens, var. affine).			
S.—	V. alnifolium	May	E. N. A.	Hobble Bush or Moosewood of northern woods. Fls. white, showy. Frt. red, later black. Deep A. C.
S.—	V. americanum	.....	N. E. N. A.	So-called High-bush Cranberry. Less compact than that of the other species. Frt. translucent, orange-red and very lustrous, remains on the branches through the winter. A. C. bright orange-red.
S.—	V. bitchuense	.....	Japan	Somewhat resembles V. Carlesii. Fls. smaller, and habit not so good.
S.—	V. bracteatum	June	Georgia	Rarest of American viburnums. Grows naturally only on the cliffs of the Coosa River near Rome, Georgia. Tall shrub with numerous slender stems.
S.—	V. buddleifolium	.....	.....	Injured 1917–18, but recovered. Better suited for milder climate.
S.—	V. burejæticum	.....	Manchuria, Korea and N. China.	Neat shrub. Fls. creamy white, in small, compact clusters. Frt. small, black. Lvs. small. Little to recommend it.

Size	Name	Time of Flowering	Habitat	Remarks
D.—	Viburnum Carlesii.....	.....	Korea.....	Compact habit. Earliest of the viburnums to fl. Very hardy and blooms freely when not more than a foot high. Fl.-buds are rose-pink. Inner surface of the corolla is white and as the fl. opens the color of the outer surface gradually fades to pink and then to white. Ornamental plant of great beauty and value.
S.—	V. cassinoides.....	June	N. E. U. S. A...	Native of swamps. One of the handsomest. Fls. slightly tinged with yellow. Frt. larger than that of the other species, first yellow-green, later becomes bright pink and finally blue-black, glaucous bloom. Splendid in autumn dress.
S.—	V. dentatum.....	June	N. A.....	Fls. white. Clusters of bright blue frts. Improves with good cultivation.
S.—	V. dilatatum.....	June	Japan.....	Very valuable. Large shrub. Fls. creamy white in clusters. Frt. bright red, lustrous.
S.—	V. erosum.....	.....	Japan and Korea	Little to recommend it.
S.—	V. furcatum.....	.....	Japan and Korea	Closely related to V. alnifolium.
S.—	V. hupehense.....	.....	China.....	Vigorous, erect stems. Fl. of no importance. Frt. red and one of most attractive of all viburnums.
S.—	V. Lantana.....	May	Europe.....	Among the shrubs of W. Europe which are really valuable in New England. Tall, compact, round-headed shrub with large, thick, dark green lvs. Frt. when fully grown is bright red but finally [turns black.
	V. lantanoides (see V. alnifolium).			
S.—	V. Lentago.....	June	E. N. A.....	Large shrub or small round-headed tree. Fls. creamy white, in large, rounded clusters. Frt. dark blue, sweet. Lvs. lustrous. One of the most beautiful and desirable of the shrubs of the N. United States. Splendid in autumn dress.
S.—	V. macrocephalum, var. sterile.....	.....	.....	Chinese Snowball. Short-lived.
S.—	V. molle.....	June	S. Ken., S. Mo..	Nearly round thick lvs. on long stems.
S.—	V. nudum.....	.....	Appalachians..	Has never become established in the Arboretum. Southern relative of V. cassinoides.
S.—	V. Opulus.....	.....	N. Europe and Siberia.	Fl.-clusters smaller than those of the American species. Larger and handsomer shrub with thicker and darker green lvs.
D.—	var. nanum.....	.....	.....	Low, dense, little bush.
	var. sterile.....	.....	.....	Guelder Rose.
S.—	var. xanthocarpum....	.....	.....	Frt. yellow.
S.—	V. ovatifolium.....	.....	China.....	Killed to ground 1917–18. Re- [covered.
	V. plicatum (see V. tomentosum).			
T.—	V. prunifolium.....	.....	U. S. A.....	Small shapely tree of the Middle States. A. C. deep wine-color.

Size	Name	Time of Flowering	Habitat	Remarks
S.—	Viburnum pubescens	.....	W. and S. of W. N. Y.	Shrubby, with slender stems spreading into large clumps. Fls. white, in small abundant clusters. First-rate garden plant. Grows naturally on lime-[stone soil.
S.—	var. affine	.....	S. Missouri.	
S.—	V. rhytidophyllum	.... .	W. China	Suffers from cold. Lost lvs. 1917–18, but recovered.
30–40′—	V. rufidulum	.....	S. U. S. A.	Southern plant distinguished by its thick and shining lvs. Largest of the American species. No other Viburnum has such handsome foliage. Rusty red felt covers the winter buds and the edges of the leaf-stalks.
S.—	V. Sargentii	.....	N. E. Asia	Dark green lvs. with long, narrow terminal lobes. Frt. comparatively small and dull-colored.
S.—	V. Sieboldii	.....	Japan	Tree-like shrub. Fls. in large clusters. Frt. bright red, then black. Lvs. light, lustrous, disagreeable odor when crushed. Fast-growing, hardy.
S.—	V. theiferum	June	W. China	Stout and vigorous. Fl. of no importance, small clusters. Frt. large, abundant, light orange, then scarlet.
S.—	V. tomentosum	.....	Japan	Cannot be spared from our collections. Large flat-topped shrub. Wide-spreading horizontal branches. Frt. small, at first bright red and finally nearly black. A. C. orange and red.
S.—	var. dilatatum	.....	.....	Not to be confounded with the true Viburnum dilatatum. Large shrub. Fls. creamy white in numerous clusters. In the autumn it is covered with small, bright red, lustrous frts. which remain in good condition for a long time.
	var. lanceatum	.....	Japan	Hardy.
S.—	var. rotundifolium.			
S.—	V. Veitchii	.....	W. China	Handsome foliage. Lvs. fall after all other Viburnums.
S.—	V. venosum	July	Coast Cape Cod to N. J.	Resembles V. dentatum. Blooms a couple of weeks later.
S.—	var. Canbyi	July	Pa. and Del.	Broad, tall, round-topped shrub. Fls. large, flat clusters. Frt. bright blue. Lvs. large, lustrous. Greatly improved by cultivation. Last V. to bloom.
S.—	V. Wrightii	June	Japan	No American counterparts. Only value is in large, bright red frt.
S.—	Vitex Agnus-castus	.....	S. Europe, W. Asia.	Not hardy in New England.
S.—	V. incisa	.....	N. China	Large shrub of open, graceful habit. Stems killed to ground in severe winters, which rather improves plant. Fls. rose. Valuable for its good habit.
V.—	Vitis æstivalis	.....	Cent. U. S. A.	Summer grape of the middle states. Large, dark green lvs.

Size	Name	Time of Flowering	Habitat	Remarks
V.	—Vitis amurensis	.....	E. Siberia.....	Hardy and valuable plant. Less vigorous than V. Coignetiæ. Valuable for walls and trellises.
V.	—V. arizonica	.....	.....	Small, pale gray-green lvs.
V.	—V. bicolor	.....	E. N. Y. and southward.	Vigorous plant with large, deeply lobed lvs., dark green on the upper surface and pale blue-green on the lower surface.
V.	—V. cinerea	.....	Miss. Valley...	Very large lvs. which are dark green and dull on the upper surface and ashy gray on the lower surface, which, like the young shoots, is clothed when the lvs. unfold with a thick, felt-like, gray covering.
V.	—V. Coignetiæ	.....	N. Japan.....	Enormous, thick, prominently veined lvs. semi-coriaceous, pale on the lower side which turn scarlet in the autumn. Large, vigorous vine. One of the handsomest of the grape-vines.
V.	—V. cordifolia	.....	Pa. and S.....	Thin lvs. light green on both surfaces. Large clusters of small, blue frt. One of the largest and most vigorous of the American species. Frts. edible after frost.
V.	—V. Davidii	.....	.....	Stems are thickly covered with spines. A. C. red. In severe winters the stems are killed back to the ground.
V.	—V. Doaniana	.....	S. W. U. S. A...	Fast-growing plant. Lvs. are large, thick and firm, rather pale bluish green in color. Native of the Texas Panhandle. Perfectly at home in New England. Frt. grows in small clusters and is covered with a pale bloom.
V.	—V. labrusca	.....	N. E.....	Large berries which vary in color from dark purple to reddish brown or amber color. Fox grape of New England. Lvs. are covered below with tawny white, tan-colored, or red-brown felt.
C.	—V. monticola	.....	Texas.....	Sweet Mountain Grape of the limestone hills of southwestern Texas.
V.	—V. Pagnuccii	.....	.....	Lvs. which are sometimes shaped like those of an ordinary grape-vine and sometimes are deeply and variously lobed much like those on the Virginia Creeper.
	V. palmata (see V. rubra).			
V.	—V. rotundifolia	.....	S. U. S. A.....	Muscadine or Southern Fox Grape.
V.	—V. rubra	.....	Cent. U. S. A.	
V.	—V. vulpina	.....	U. S. A.....	Frost Grape.
V.	—Wisteria floribunda	.....	N. China.....	Common Japanese Wisteria. Fls. purple, smaller, more fragrant, in narrower and more open clusters than W. sinensis, hardier. A. C. clear yellow.
V.	— var. alba	.....	.....	Fls. pure white.
V.	— var. macrobotrys	.....	.....	Fls. in very long clusters.
V.	— var. rosea	.....	.....	Fls. pink, or white, tinged pink.

Size	Name	Time of Flowering	Habitat	Remarks
V.—	Wisteria floribunda, var. variegata	.....	.....	Lvs. blotched with yellow.
V.—	var. violacea-plena	.....	.....	Fls. double, ugly. Blooms rarely.
V.—	W. frutescens	.....	U. S. A.	Slender vine. Fls. small, fragrant, in short, compact clusters. Blooms later than Asiatic species.
V.—	var. alba	.....	U. S. A.	Fls. white.
V.—	W. japonica	.....	Asia	Smaller than other Asiatic species. Fls. pale yellow, in small clusters. Not hardy in North.
V.—	W. macrostachys	.....	Mo., La., and Texas.	Handsomer than W. frutescens. Fls. larger, in longer racemes, Fragrant. Blooms later than Asiatic species. Hardy.
V.—	var. magnifica	.....	.....	A fine form.
V.—	var. albo-lilacina	.....	.....	Fls. blue and white.
	W. multijuga (see W. floribunda).			
V.—	W. sinensis	.....	China	Only white-fld. form known. Vigorous and hardy, but fl.-buds often killed by cold in N. E.
V.—	W. venusta	.....	Japan	Hardy. Fls. white, in broad clusters. Earliest to bloom.
T.—	Xanthoceras sorbifolia	.....	China	Shrub or small tree. Fls. white, in spreading racemes. Red at base of petal. Frt. like buckeye. Lvs. dark.
D.—	Xanthorrhiza apiifolia	May.	.....	Yellow-Root. Fls. small, chocolate, in terminal racemes, with opening of lvs. A. C. pale canary-yellow and green. Spreads rapidly into dense masses which take entire possession of the ground. Will not thrive in lime-[stone soil.
S.—	**Yucca concava.**			
S.—	**Y. filamentosa variegata.**			
S.—	**Y. flaccida**	.....	.....	Generally appears under the name [of Y. filamentosa.
S.—	**Y. glauca**	.....	Rocky Mts.	
S.—	**Y. lineata.**			
S.—	**Y. patens.**			
T.—	Zelkova crenata	.....	Caucasus.	
T.—	Z. serrata	.....	Japan	Keaki is most valuable Japanese wood. Genus related to Ulmus. Flourishes here.
2–4′—	Zenobia pulverulenta	.....	N. C. Fla.	Deciduous lvd. shrub. Fls. pure white and from ⅓–½ in. long and broad, produced in compact clusters arranged along leafless branches of the previous year and are perhaps more beautiful than those of any of the andromeda-like plants. Chalky white lvs. covered with a dense white
2–4′—	var. nuda	.....	.....	Green lvs. [bloom.

Six best conifers for Southern New England:

Tsuga caroliniana	Pinus resinosa	Abies concolor
Pinus Strobus	Tsuga canadensis	A. homolepis

List of exotic trees recommended for planting in the Northern States

Populus Maximowiczii	Salix fragilis	Fagus sylvatica
Ginkgo	S. babylonica (not always hardy	Tilia vulgaris
Pseudolarix	in Mass.)	T. platyphyllos
Larix decidua	Cercidiphyllum	T. cordata
Populus alba	Morus alba	Æsculus Hippocastanum
P. canescens	Ailanthus	Acer platanoides
Salix alba	English Elm	

BOOK REVIEWS

REPORT OF THE UNITED STATES HOUSING CORPORATION. (U. S. Bureau of Industrial Housing and Transportation.) Vol. II, Washington, Government Printing Office, 1919. 524 + xix pages. Illus., plans. 11¾ x 9 inches. Price $1.50.

The Housing Bureau was created to help win the war by providing for workers in war industries such housing and living conditions as were required for the health, self-respect, and efficiency of the workers, in order that the production and shipment of munitions and supplies might not continue to be imperiled by the intolerable living conditions caused by the war in manufacturing centers. This volume is a part of the accounting which the Housing Bureau is called upon to make to the Secretary of Labor and thus to the people of the United States. As a record of actual physical achievement, when measured against the whole of the task which was to be performed, it is like the record of most of the other government bureaus, which came to their maximum activity and efficiency only shortly before the time when the armistice made their efficiency of no further military value. Although the power of the Housing Bureau for further creative effort has terminated, the need for proper industrial housing and town planning has not ceased with the war, as has the need for munitions. There is now a great and growing housing shortage in this country, and the contentment and consequent efficiency of industrial workers is no less important to the country in peace than in war. The Housing Bureau in endeavoring to do its job as logically and effectively as possible was obliged to evolve certain methods of determining what the circumstances were in each housing problem dealt with, and certain conceptions of what should be aimed at in handling these problems; and the records of this organized thinking ought to be immediately valuable to such of us as are now dealing with similar problems. Furthermore, the detailed records of the house plans and housing schemes worked out by the Housing Bureau, even though less than half of them ever came to construction, form much the largest available collection of data as to comparative advantages and relative costs of work of this kind. The more important items have been carefully stated and tabulated in the report, without, however, any considerable attempt to draw from this mass of data the conclusions which it may warrant, this being obviously too slow a process to be possible in the time.

Careful study and comparison of this material, however, should throw a great deal of light on various practical points in industrial housing, and will be equally valuable to the people of this country whether it shall incidentally also show that the Housing Bureau was correct or incorrect in the various decisions which it was forced to make, under stress, with such skill and information as it then had at hand.

To quote the editor's note:

"The accompanying volume endeavors to set forth in as small space as practicable those activities and accomplishments of the Housing Corporation which were most

directly concerned with the *design* of its various housing projects. The general procedure of the corporation is discussed merely in those aspects which more directly affected project design, and therefore, while the activities of the Architectural, Town Planning and Engineering Divisions are fully covered herein, mention is made of certain aspects only of the work of the Real Estate Division, the Transportation Division, the Homes Registration Division, and the Construction Division, and only occasional reference is made to the other divisions of the corporation, all of which are to be considered in detail in Volume I of the corporation's report.

"The main body of the present volume consists essentially of three parts: (1) A short general statement of how the Housing Corporation proceeded to ascertain what the situation was in the community to be aided, and how it determined what its appropriate action for relief should be in each case; (2) a necessarily incomplete statement of some of the general principles governing this kind of design which the design divisions considered in their procedure or which they learned from their experience; and (3) a short and compact record, in plans, perspectives, tables, and text, of what the problem was which the corporation actually found in each of its important projects, and what attempt was made to solve it, as a matter of complete and reasoned design.

"This volume shows by plans and other drawings as much as was possible in the allotted space about the more important projects; it states in tabular form, for compactness and ease of comparison, all the information as to the projects which it was practicable to represent by figures; and it sets down, in the text describing each project, only those facts which were of particular interest or which had a special and important influence upon the design.

"The appendix contains reprints of most of the directions which were issued by the corporation as guides in design and construction, and the form of contract entered into by the general contractor.

"A bibliography is included covering the most important articles on industrial housing published during the war to April, 1919, compiled by the consulting librarian primarily from the references collected for current use in the work of the corporation."

Chapters VI and VII, dealing with the general appearance of the housing project and some considerations as to costs and types of development, make no attempt at any completeness of technical discussion; they merely set forth some of the more fundamental considerations for the non-technical reader who might want to know what the problem was with which the Housing Corporation was concerned.

The project descriptions in Chapter VIII are similarly non-technical. The drawings consist mostly of simple layout plans showing the street system, the house-locations, the lot-subdivisions, and in some cases the tree-planting. This simplicity enables the plans to be reproduced each upon one page. The architectural drawings consist of first- and second-floor plans, together with elevations or perspective drawings of the more important types of buildings in each project illustrated. These plans and drawings are more than ordinarily intelligible to the lay reader. It is a pity that more photographs could not have been used, but the work under construction was obviously for the most

part in an incompleted state, so that photographs would not have been as explanatory as the drawings are.

Although certain members of Congress, according to reports in the daily press, seem to find the volume a useless piece of extravagance—an "account of a great effort for future generations to know what somebody had done to aggrandize themselves," as Representative Treadway put it,—this record of experience will be of practical productive value in the hands of municipalities, housing companies, employers of labor, real estate men, technical designers of various sorts, and builders, who as tax-paying American citizens are entitled to the information.

NOTE

IN the previous number of Landscape Architecture attention should have been called to the fact that the minute upon the life of Charles Mulford Robinson was written by Professor James Sturgis Pray, as Chairman of a Committee, with Mr. Pitkin and Professor Frederic Noble Evans, who were appointed for this purpose by the American Society of Landscape Architects.

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